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ABSTRACT

The State of Iowa Advisory Council on Career Education has elected to investigate each year one specific component or element of vocational and career education in the State, rather than undertake a comprehensive review. The topic of the 1974 report is cooperative work-study programs in the State. The Council collected information and observations by visiting 12 school systems in various sectors of the State, ranging in size from large to small, located in metropolitan, suburban, and rural communities, and including both schools that do offer and that do not offer cooperative programs. The council conversed with students, teachers, and administrators; data were also collected by the Council staff, and reviewed by the Council members for purposes of verifying or rejecting field observations. The report addresses itself to three major questions: (1) How valid and appropriate is the State plan for career education? (2) How effectively are the needs of the people of Iowa being served? (3) To what extent have the recommendations contained in the Council's 1973 report been implemented? Appended to the report are 80 pages of data on which the recommendations were based, including graphs, maps, tables, supplementary papers, and a summary of information gleaned from the field visits. (Author/AJ)

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Iowa
a place to grow

1974 REPORT
ON THE
CAREER EDUCATION EFFORT
IN IOWA

Prepared by

STATE OF IOWA
CAREER EDUCATION
ADVISORY COUNCIL

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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1974 ANNUAL REPORT

State of Iowa

Career Education Advisory Council

Des Moines, Iowa 50319

December 1974

STATE OF IOWA
CAREER EDUCATION ADVISORY COUNCIL

A Concept Summary
of the
1974 Annual Report

Current Program Quality

Field observations of existing cooperative programs reveal that numerous coordinators of specialty field cooperative programs are not giving sufficient attention to training outlines and agreements and should be spending more time in field coordination. Improvement could occur if local principals would give more attention to supervision of cooperative vocational programs.

It is evident that in the twelve secondary schools visited extreme scheduling rigidity exists. The Council didn't observe a single case where the students were enrolled in cooperative programs for less than a full year. A number of the students interviewed were receiving training in jobs that might have been learned in a semester or less of school time.

New Programming Trends

Observations reported above suggest that the instructional quality of existing specialty field cooperative programs is not as good as it might be. Multi-field cooperative programs would require that a coordinator organize instruction for students receiving training in more diverse occupations than is currently required of specialty field coordinators. It may be concluded that since many specialty field cooperative are at least partially lacking in quality that multi-field cooperative programs might provide little more than a work experience program for the student. Multi-field programs could likely become little more than an opportunity for the student to earn money and credits on school time while not necessarily contributing substantially to the intellectual and job preparation growth of the individual.

Local Schools Involvement in Planning

There are strong indications that local schools have had marginal involvement in state planning. This is evidenced in many of the twelve schools visited, by minimal effort being expended at local planning to meet the vocational needs of their students. Senate file 126 requires local evaluation and goal setting to overcome school program deficiencies. We strongly encourage that assistance be provided to local administrators and boards in the area of evaluation and planning. Hopefully this would improve educational programming designed to prepare young people for more effective performance as adult family and community members and workers.

Improving Opportunities for Meeting Students Vocational Needs

Limited numbers of vocational programs in many rural areas of the state may be the cause of high youth unemployment, and high drop-out rates. Large rural to urban migration and commuting may contribute to the high youth unemployment in urban centers of the state. Approximately 47% of the 12th grade students in the public schools (primarily in rural areas) have one or less wage earning vocational programs available to them. While secondary vocational program expansion has occurred during the past four years, the majority of it has occurred in medium or large schools where a multiple number of vocational programs were already available. It is recognized that some area schools are beginning to provide vocational programs for secondary students. Consideration should be given to other vocational education delivery options. Smaller local schools could join together to provide vocational programs. These efforts should receive the same financial aid as provided for like effort provided by area schools.

Funding of Secondary Vocational Programs

Funding practices for vocational programs in secondary schools needs to be evaluated. Recent legislation requiring controlled budgets may have made the incentive concept of reimbursement for secondary schools obsolete. A reimbursment policy utilizing a support concept is necessary so that broad vocational opportunities may be provided to secondary students in the future.

List of Council Members Who Served
From July of 1973 to June 1974

Gordon Bennett	Ottumwa, Iowa
James E. Bowman	Des Moines, Iowa
Walter Cunningham	Waterloo, Iowa
Dr. Robert Kiser	Sioux City, Iowa
Robert Koons*	Clinton, Iowa
Kenneth R. Lewis	Des Moines, Iowa
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Mrs. JoAnn Tredway	Harlan, Iowa
Robert Skinner*	Des Moines, Iowa
Mrs. Evelyne Villines	Des Moines, Iowa
Joe White	Iowa Falls, Iowa

* Persons who are no longer serving on the Council.

Council Members Appointed since July of 1974

Robert I. Hale	Burlington, Iowa
Henry E. Merkel	Des Moines, Iowa
Mrs. Phyllis Moershel	Cedar Rapids, Iowa
Dr. Garlyn H. Wessel	Dubuque, Iowa

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INTRODUCTION AND DEFINITION OF TERMS

Introduction

The annual evaluation reports prepared by this Council for fiscal year 1970, 1971, and 1972 focused on a comprehensive review of vocational and/or career education activities carried on in Iowa. It became evident that this approach resulted in a report so large as to make its value as a useable guide for future activities questionable. Beginning with the 1973 report this Council elected to investigate a specific component or element of vocational and career education for its annual report. The 1973 report assessed the degree to which the career education concept was being implemented in the teacher education colleges or departments in the three State Universities. This year the Council elected to investigate and prepare its report on the topics, cooperative and work study programs.

The Council collected information and observations by visiting twelve school systems in various sectors of the State. The schools ranged in size from large to small and were located in metropolitan, suburban, and rural communities. Schools that offered and did not offer cooperative programs were included in the visits. During the visits the Council conversed with students, cooperative program teacher-coordinators, and school administrators. Data was also collected by Council staff which is included in the report. This data was reviewed by Council members for purposes of verifying or rejecting field observations.

The following report will address itself to three major questions. These are:

1. How valid and appropriate is the State Plan for Career Education?
2. How effectively are the needs of the people of Iowa being served?
3. To what extent have the recommendations contained in the Council's

1973 Annual Report been implemented?

The National Advisory Council on Vocational Education has requested that each State Council also include in its report:

1. An evaluation of the degree to which postsecondary institutions in each state are involved in planning their future direction.
2. An evaluation of the effectiveness of efforts directed toward vocational education research, implementation of exemplary programs, and curriculum development activities.

A supplement to this report will be developed later which will be addressed to these two major topics.

Limitations

The majority of the thirteen members of this Council are employed in full time jobs. The Council members and their employers contributed approximately 480 man hours of time during the field visits, plus time spent attending other scheduled Council meetings. Field visits to schools were limited to local secondary schools. Time constraints did not allow the expansion of field visits to postsecondary cooperative programs offered by area schools. For this reason the bulk of this report is devoted to efforts of local schools.

Definition of Terms

The following terms are defined to enhance the reader's understanding of the report.

Cooperative Program - A method of preparing the individual for employment by providing him with the needed skills and knowledge for an occupation. The cooperative method utilizes alternating periods of employment and schooling on a part-time or full-time basis. The part-time method is used almost exclusively by the secondary schools, while both methods are used by area schools.

Part B Cooperative Programs - These are cooperative programs which have been functional for more than one year. Local school districts assume major funding responsibility after the second year of operation.

Part G Cooperative Programs - New or expanded cooperative programs. Locations of Part G Programs are influenced by priorities given to school districts with high youth unemployment and dropout. An expanded program is one in which the number of coordinators (teacher personnel) is increased as a consequence of increased enrollment.

Preparatory Programs - Preparatory programs are designed to prepare the student for employment with simulated occupational experiences taught within the school classroom and/or laboratories.

Work-Study Program - Dropout prevention for vocational education students. A method to provide financial assistance to students who are in need of earnings to allow them to commence or continue their vocational education programs. In-school instruction is not necessarily related to the job assignment.

Terms Adopted for Use in This Evaluation:

Specialty Field - The term used to refer to a general occupational area(s) or specific type of cooperative program, i.e., Distributive Education, Office Education, etc.

Offerings - The term used to refer to number of classes or courses in a specialty field. The term "offerings" covers (1) one or more sections of a class, each section composed of a group of students and a teacher-coordinator. (2) separate classes or courses under individual specific fields, such as Radio and TV Broadcasting within the Trade and Industrial Education specialty field.

Expansion - The use of this term as it applies to local or area school efforts means that existing cooperative programs are enlarged through the addition of both professsional personnel and an increase in enrollment.

Multi-field Program - A cooperative program designed to serve the needs and interests of students in two or more specialty fields when more than one program is not established in the school district. Students may be placed in varied training stations, and the teacher-coordinator provides related classroom instruction structured to reinforce the on-the-job learning.

Teacher-Coordinator - A member of the school professional staff who teaches occupational subject matter in the classroom, coordinating the instruction with students' on-the-job experience. The teacher-coordinator visits students at their training station.

GOAL I

THE VALIDITY AND APPROPRIATENESS OF THE STATE PLAN FOR CAREER EDUCATION

The statistical portion of the State Plan for Career Education projects on a one-year and five-year basis the activities that will be accomplished by local and area schools and the Department of Public Instruction. The plans for the statewide vocational program implementation should be based on projections of labor market needs and student interests.

The cooperative method of instruction is used in both the secondary and postsecondary schools to provide individuals with employment skills and knowledge.

Secondary school vocational-cooperative programs, in most cases, are offered to the student during the senior year. The student usually receives one hour per day of instruction in the school devoted to building job knowledge (know-why) and general job-related information. In addition, the student in the vocational cooperative program is released from school for one-half of each day for on-the-job training experience with an employer to learn the necessary skills (know-how). The secondary school cooperative coordinators are responsible for instruction in many occupations within their specialty field, such as office occupations, distributive education, trade and industrial education and the like.

Programs at the postsecondary level that use the cooperative method of instruction, in most cases, are structured to prepare the individual for a specific occupation such as, livestock marketing, fashion merchandising, legal secretary, and the like. Usually students enrolled in postsecondary preparatory programs that use the cooperative method spend greater amounts of time within the institution learning skills and technical knowledge than do students enrolled in secondary school vocational-cooperative programs. Block-time release from school to learn job skills occurs more frequently at the postsecondary level than at the secondary level.

As reported in the introduction, this report will be addressed to secondary school efforts.

PROGRAM PLANNING

Labor Market Needs

The 1975 State Plan for Career Education contained the first published results from the CENIS* project. The labor market needs portion of the CENIS project is used to project future programming direction. Appendix E, Table 1, outlines in summary form the net labor demands of the State according to vocational specialty field. The final column of this table identifies the percentage of Net Labor Demand, by specialty field, compared to the projected total labor demand of the State.

The most recent labor market needs survey data available from the CENIS project were collected in the fall and winter of 1972. It is necessary that data used for vocational program planning be current due to changing employment trends caused by shifts in Iowa's economy.

COMMENDATION: THE COUNCIL COMMENDS THE STATE DEPARTMENT OF PUBLIC INSTRUCTION AND THE STATE BOARD FOR PLANNING A SECOND CENIS SURVEY FOR THE SPRING OF 1975.

Planning for Program Expansion

Table 3 of the State Plans for fiscal years 1970 through 1974 identifies the projected programmatic and enrollment outcomes, through objective statements, for the next year and five years hence. The financial support and staffing expectations for the programs from Parts B and G of Public Law 90-576 are also identified.

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* CENIS = Career Education Need Information System

New cooperative programs should be keyed to labor market needs identified in Table 1 of the State Plan. Currently Table 3 of the State Plan simply states that Part B and Part G programs will be established. Future state plans should identify the types of specialty field and/or multi-field cooperative programs that are planned for implementation.

More finite definition of needed program expansion, by occupational area, would provide an improved set of guidelines for use by field service consultants in the Department of Public Instruction as they assist local schools in developing new, or expanding existing cooperative type vocational programs.

> RECOMMENDATION: THE COUNCIL RECOMMENDS THAT BEGINNING WITH THE FISCAL YEAR 1976 STATE PLAN, THE NUMBER OF NEW COOPERATIVE PROGRAMS (AS IDENTIFIED IN TABLE 3) TO BE STARTED BE KEYED TO LABOR MARKET NEEDS IDENTIFIED BY THE OFFICE OF EDUCATION TWO DIGIT CODE NUMBER IN TABLE 1 OF THE PLAN.

Iowa's Training Station Potential for Expanding Cooperative Programs

Recommendations for State Plan improvements need to be keyed to realistic potential for establishement of new programs. Council field visits during the spring of 1974 to schools that offer cooperative programs revealed that the majority of students enrolled in cooperative programs are employed by firms that hire 25 or less employees. Efforts were expended by the Council to identify areas of the State where it would be impractical to implement one or more cooperative programs because of the lack of a sufficient number of employers compared to the senior class enrollment. Economic data on the employers in each county was gathered, and the number of seniors in each county was estimated. The estimated number of seniors was then divided into the number of businesses employing 19 persons or less, which yielded a percentage ratio of employers to students.

A sample of metropolitan and rural counties in which successful cooperative programs had been offered by the schools for several years was identified. This information revealed that a minimum ratio of 72 was necessary to make it feasible to establish cooperative type programs in a county. (See Appendix B, Substudy for additional information.)

Following this, an employer-student ratio was calculated for each county in the State. Map 1, Appendix D, shows that cooperative programs should be feasible for 94 of Iowa's 99 counties. Further study, however, discloses that one of the counties having ratios lower than 72 is supporting several cooperative programs. The Council Bluffs school system, in Pottawattamie County, offers cooperative programs. Some students may be placed in the adjacent community of Omaha for training.

> CONCLUSION: BASED ON SUCCESSFULLY OPERATING COOPERATIVE PROGRAMS, EMPLOYER-STUDENT RATIOS SUGGEST THAT ALL BUT FOUR IOWA COUNTIES HAVE A SUFFICIENT NUMBER OF EMPLOYERS EMPLOYING 19 PERSONS OR LESS TO SUPPORT ONE OR MORE COOPERATIVE PROGRAMS.

Other Priority Considerations Relating to Planning Program Expansion:

Projections of new cooperative program "starts" and expansion are identified in the State Plan for Career Education. Geographic priority areas are also identified. These geographic priority areas are locations where there is incidence of high youth unemployment and dropout rates. Narrative elements in the State Plan in each of the fiscal years from 1971 through 1974 indicate that efforts will be expended toward encouraging local schools in the geographic priority areas to implement cooperative vocational programs. Earlier State Plans indicate that 50% of Part G cooperative funds may be used in the geographic priority areas while later State Plans report that 50% of the Part G funds will be used in the priority areas.

A review of the identification of priority areas in State Plans from fiscal year 1971 through fiscal year 1974 (See Appendix D, Maps 2 through 5) reveals that a rather significant change has occurred in the identified priority areas. Generally, the number of school districts reporting dropouts in excess of the state average has increased. The number of counties experiencing high youth unemployment has also increased. The increase in reported school dropouts is most likely due to an improvement in the reporting system developed by the Guidance Section of the Department of Public Instruction.

COMMENDATION: THE COUNCIL COMPLIMENTS THE GUIDANCE SERVICES SECTION OF THE DEPARTMENT OF PUBLIC INSTRUCTION FOR IMPROVING ITS DATA COLLECTION ON THE NUMBER OF DROPOUTS IN THE STATE.

Current estimates of youth unemployment are made through the use of a federally-developed formula based on the unemployment compensation claims in the State. Quoting paragraph 1.10D of the 1974 State Plan: "The unemployment rate is ascertained by a comparison of national youth unemployment to general unemployment. The resulting ratio is then applied to the general unemployment in the state and/or area."

Local employment service offices (of the Iowa Employment Security Commission) use computerized equipment to tabulate and record applicant information. Since this state agency likely has the necessary data available it would appear that a more reliable projection formula could be developed, based on available client data. This could provide improved information for vocational education planning.

RECOMMENDATION: THE COUNCIL RECOMMENDS THAT FUTURE ESTIMATES OF UNEMPLOYMENT, ACCORDING TO AGE GROUPS AND LOCATIONS, BY THE IOWA STATE EMPLOYMENT SECURITY COMMISSION BE MADE FROM APPLICANT INFORMATION DATA AVAILABLE TO THEM IN THEIR LOCAL OFFICES.

The effectiveness of planning for cooperative programs for the fiscal years of 1970 through 1974 has been hampered by changes in definitions of terms and format for reporting planned activities. Table 2, Appendix E, consolidates data from the State Plan and illustrates the problems which have been encountered. During fiscal years 1970 through 1972 the level of program activity (secondary or postsecondary) was not identified. The 1973 and 1974 State Plans do identify educational levels of effort.

During 1972 and in prior years some of the planned expenditures of Part G funds (which were specified in legislation to be used for new cooperative programs) were used for reimbursing a proportionate share of the cost of existing programs in which enrollment increased. In 1973 the U.S. Office of Education ruled that these funds were to be used to reimburse programs that did not exist previously.

> COMMENDATION: THIS COUNCIL COMMENDS THE U.S. OFFICE OF EDUCATION FOR THE SIGNIFICANT IMPROVEMENT IN FORMAT OF TABLE 3 WHICH IS USED BY ALL STATES TO IDENTIFY PROGRAMS PLANNING ACTIVITIES. THIS KIND OF NATIONAL LEADERSHIP IN PLANNING WILL MOST LIKELY BE BENEFICIAL TO ALL STATES.

Potential of Educational Institutions to Implement Cooperative Programs in Medium and Large Schools

Appendix B of this report contains a substudy to this annual report. This study was designed to identify the potential for growth of cooperative programs in secondary schools. Administrative problems in implementing new educational programs vary according to the size of the school district. For this reason the potential for new cooperative programs was considered for school systems with a kindergarten through twelfth grade enrollment of 1,400 to 1,899, 1,900 through 3,799, and 3,800 or more. As reported earlier, it appears that all but four Iowa counties have a sufficient number of employers hiring 19 or less employees to support a cooperative program. Pages 15, 16, and 17 of the substudy (Appendix B) identify the school districts in the State which hold the potential for implementing one or more cooperative programs. Thirty-six of the 64 school districts that could implement cooperative programs are classed as high priority school districts. (See preceding reference to priority ratings of areas of the State.) The analysis on pages 15, 16, and 17 (Appendix B) reveals that 90 additional cooperative programs could be started in school districts having enrollments of 1,400 or more students. Effort was not expended toward identifying cooperative programs which could be justified in school systems with enrollments of less than 1,400 students. It does appear feasible that schools of this size could jointly implement cooperative programs with an adjacent school system.

The new definition of what constitutes a Part G program was apparently in effect when the 1973 State Plan was prepared. The fiscal 1974 State Plan predicted 6 new cooperative programs would be established in the fiscal year and estimated that 40 new cooperative programs would be implemented by 1978. These figures were increased to 45 and 159 respectively in the fiscal 1975 State Plan.

Plans for expansion of Part B cooperative programs are keyed to the number of Part G cooperative programs started. New cooperative programs are funded during their initial year from Part G, PL 90-576, and thereafter are funded from Part B of the act.

RECOMMENDATION: THE COUNCIL COMMENDS THE DEPARTMENT OF PUBLIC INSTRUCTION ON ITS PROJECTED EXPANSION IN FISCAL 1975 AND RECOMMENDS THAT THE DEPARTMENT COMMIT STAFF RESOURCES TO REACHING THAT GOAL. PAGES 15, 16, AND 17 OF APPENDIX B, PAPER 1, ARE PROVIDED FOR DEPARTMENT OF PUBLIC INSTRUCTION USE. THESE PAGES IDENTIFY SPECIFIC SCHOOL SYSTEMS WHICH SHOULD BE ENCOURAGED TO IMPLEMENT COOPERATIVE PROGRAMS.

Local School Involvement in Planning:

One element in the development of the State Plan is the expression of desire on the part of the local school board to offer a vocational education program. This is accomplished by the school system filing a CE 4 form with the Department of Public Instruction.

Vocational programs should be keyed to student needs, interests and talents, and labor market needs. These programs are essential to preparing youth to assume productive roles in adult society. Reports to Council members during field visits reveal that few local schools utilize followup information from earlier graduating classes. Use of results from student interest surveys could be improved as an adjunct to planning new curricular offerings. Little knowledge or concern was expressed by school administrators about employment opportunities or labor market needs. During its last session, the Iowa legislature passed Senate File 126 which contained provisions requiring local boards of education to evaluate their educational efforts, identify major educational needs, and develop short and long-range plans to meet these needs.

RECOMMENDATION: THE STATE BOARD, THROUGH ITS PROFESSIONAL STAFF, IS ENCOURAGED TO CONTINUE AND EXPAND ASSISTANCE TO LOCAL SCHOOL PERSONNEL IN DEVELOPING PLANNING COMPETENCIES WHICH WILL INCLUDE THE ANALYSIS OF STUDENT AND LABOR MARKET NEEDS AND DEVELOPMENT OF CAREER AWARENESS, EXPLORATION, AND VOCATIONAL EDUCATION PROGRAMS TO MEET THOSE NEEDS.

Providing Cooperative Programs to Students in Smaller School Systems:

Priorities identified in the State Plans for Career Education have placed emphasis on establishing cooperative programs in school districts where there are high rates of dropouts and high rates of youth unemployment. A review of past efforts to meet these priorities reveals that a minimum number of cooperative programs have been established in the priority areas when compared to the apparent need. A review of Map 5, Appendix D, reveals that there are numerous local school districts located in high priority areas that have a K-12 enrollment of 1,900 or less. These schools may not have sufficient senior student enrollment to justify the employment of staff to coordinate specialty field cooperative programs. One alternative solution is being implemented by the Department of Public Instruction. Local schools are being encouraged to establish multi-field cooperative programs.

During Council field visits it became apparent that the potential for a higher quality of instruction exists when specialty field cooperative coordinators are employed by the school system. Should several school systems within a county or economic area decide to offer multi-field cooperative programs an unhealthy competitive atmosphere might be established between the schools and the employers who provide training stations. A second alternative to providing cooperative programs may be the establishment of a joint agreement between adjacent school districts, whereby the districts would employ the necessary number of specialty field coordinators.

RECOMMENDATION: THE COUNCIL RECOMMENDS THAT PROVISION IN STATE PLANS CALLING FOR THE EXPENDITURE OF 50% OF PART G FUNDS IN SCHOOLS WITH HIGH DROPOUT RATES AND HIGH YOUTH UNEMPLOYMENT BE RETAINED AND THAT FUTURE DEPARTMENT OF PUBLIC INSTRUCTION STAFF CONSULTING EFFORTS WITH SMALLER SCHOOLS IN THE STATE BE DIRECTED TOWARD ENCOURAGING JOINT EFFORTS BETWEEN ADJACENT SCHOOL DISTRICTS. FURTHER, WHERE JOINT EFFORTS ARE POSSIBLE, THE EMPLOYMENT OF SPECIALTY FIELD COOPERATIVE COORDINATORS SHOULD BE ENCOURAGED.

ENROLLMENT PLANNING

Trends in Planning

The State Plans for fiscal years 1970, 1971, and 1972 were prepared in a format which did not separate Part B and G projected enrollments for cooperative programs. It was necessary to assume that any increase in enrollments that were predicted would be funded from Part G of the act. The 1970 and 1971 State Plans' enrollment projections did not appear to coincide with the teaching loads assumed to be reasonable for the additional staff which were planned to be employed. The 1972 State Plan reflected an improvement in the relationship between projected growth and projected additional staff to be hired by local school systems.

The enrollment projections in the 1973, 1974, and 1975 State Plans were presented in an improved format. A review of actual enrollments which developed compared to projected enrollments for Parts B and G of the Act reveal that the process of planning for enrollment expansion was more realistic in later years of the five year period.

The long-range plan predicts the number of persons that will be served five years subsequent to the annual plan. The average annual enrollment increase is keyed to the number of additional programs planned which is an average of ten programs per year.

A review of existing cooperative and preparatory programs available to seniors in secondary schools accross the state reveals that of the 45,209 seniors enrolled in FY 1974, an estimated 14,436 or 31.9 percent were enrolled in cooperative and preparatory programs. Additional quantitative evaluation follows:

Schools which provide only one vocational program for their students are considered by many professionals in education as not meeting the diverse interests and talents of the student body.

For that reason, those schools offering two or more cooperative and/or preparatory vocational programs (excluding Home Economics) were counted together with their estimated 12th grade enrollments. These figures show that 28,488 students or 52.6 percent of the estimated total of 12th grade students in the state attend 63 school districts offering two or more programs in these specialty fields. Thus, nearly one-half of the state's seniors attend the remaining 390 schools offering only one program or no vocational education.

A review of planning for the use of funds (See Appendix C, Graph 5) reveals that over the past four-year period the amount of Part G funds unexpended from previous fiscal years has increased in the most recent years. Previous elements of this report reveal that planning for program expansion has been conservative when compared to the potential for growth and the funds available. The combination of these two facts indicate that enrollment expansion plans are not keyed to the potential for growth in services to secondary students.

Commendation: The Council compliments the Department of Public Instruction for the improvement in clarity of data reported in its enrollment projections in the State Plan. The U.S.O.E. is also complimented on its improvement in the format guidelines for the State Plan enrollment projections.

Recommendation: The Council recommends that future plans for cooperative enrollment increases be more nearly keyed to the needs of the people in the State, the potential for program growth, and the funds available.

FINANCIAL PLANNING FOR COOPERATIVE PROGRAMS

State Plan Contents

The amount of funds provided by the federal government to establish new cooperative programs in the states is established within Part G of Public Law 90-576 and the various annual appropriations bills passed by Congress. Actual Part G allocations to Iowa for the fiscal years from 1970 through 1973 are:

Fiscal Years	Dollars	% Increase or (Decrease)
1970	249,029	-
1971	312,346	20%
1972	327,627	4%
1973	324,976	(1%)

The first time that plans for expenditure of Part B funds for cooperative programs were identified was in fiscal year 1973. Table 3, Appendix E reflects the improvement in financial planning from fiscal 1973 through fiscal year 1975. Part B and G expenditures are identified in these plans in addition to proposed expenditures for cooperative programs at the secondary and postsecondary level.

The Council integrated planned enrollments and dollar expenditures in Appendix E, Table 3, for program activities at the secondary and postsecondary level. A review of this table reveals that the dollar committment per student for Part G funds for secondary programs deviated greatly in the FY 74 State Plan when compared to the plans for fiscal years 1973 and 75. The reader should also observe that there is a projected great increase in reimbursement, per pupil, for Part B expenditures for secondary cooperative programs in fiscal year 1975 when compared to fiscal years 1973 and 1974.

Council Analysis

Financial planning for Parts B and G activities at the postsecondary level for cooperative programs seems to be as erratic as that observed for the secondary level. Projected per student expenditures from Part B of the Act average approximately $156.00 for fiscal years 1973 and 1974 while the projected expenditure per student for fiscal 1975 increased to $1,731.56. Expenditures projected for use of Part B funds at the postsecondary level range from $355.56 per pupil to nearly $2,000.00 over the three fiscal years. Expenditures per pupil are projected to be over $1,700 for fiscal years 1973 and 1975 while the same expenditure for the middle fiscal year, 1974, are projected to be $355.56.

Per pupil direct costs (excluding overhead expenses) of ongoing cooperative programs at the secondary level might be estimated at 66 percent of the average pupil cost in the State. This is based on the student receiving on-the-job experience for three hours per day, plus one hour of related instruction for a total of four periods of an assumed six period day. Sixty-six percent times an average pupil (FY 1973) cost of $975 equals a program cost of $643 per pupil. The projected reimbursement for that fiscal year was $6.70 per pupil or approximately one percent of the estimated direct per pupil cost to local schools.

Deviation between projected per pupil expenditures between fiscal years 1973 and 1974, and 1975 may be due to a movement reflected in the 1975 State Plan to plan for actual needs rather than develop the plan based on anticipated Congressional appropriations.

Incentive and Support Aid Concepts

The differences in projected per pupil expenditure for secondary and postsecondary cooperative programs may reflect two separate and distinct philosophies for reimbursement. Planned expenditures for secondary programs are keyed to an incentive concept in which the local school is encouraged to start the program with an 80 percent reimbursement of instructor salary and travel expense and in suceeding years the percentage of reimbursement is reduced by 20 percent increments until the "average reimbursement" is reached. (Approximately 20 percent.)

Planned reimbursements for postsecondary programs are based on the total program cost which includes both direct program costs and indirect costs. This type of planned expenditure reflects a support concept of reimbursement.

Programming Alternatives

Narrative comments earlier in this report cited the many secondary schools which lack a broad range of cooperative and simulation type preparatory vocational programs. This lack of availability of a broad range of vocational programs reflects negatively on the degree to which many school districts provide comprehensive curricular offerings in their secondary school which meet the needs, interests, and aptitudes of the students enrolled. It is recognized that limited enrollments in many schools inhibit the broadening of the curriculum within the school to meet the full range of student needs and interests. Encouragement toward cooperative efforts among local schools would be a viable alternative to broadening the curricular offering.

Local School Budgeting Constraints

During the past several years local schools have been functioning under legislation requiring "controlled budgets." (For an explanation of this see Appendix B, Paper 2) Interviews with local school administrators (See Appendix A) reveal that while a number of new cooperative programs have been established in recent years it is predicted that this trend will not continue in individual school districts due to declining enrollments. Projections for potential cooperative program growth (Appendix B) indicate that a great potential for growth of cooperative programs exists. This potential for growth can occur in the medium or larger school systems or through joint efforts of smaller local schools.

The current incentive concept of reimbursement for secondary schools is an out-of-date concept since the passage of the "controlled budget" law. For this reason the Council advises that future appropriations askings from the legislature and the Congress be based on a support concept for secondary schools. Without implementing a support concept of reimbursement it is likely that future growth of vocational programs at the secondary level will be inhibited. Should this occur, many secondary students could be deprived of instructional opportunities suited to their needs, interests, and talents which would contribute to their functioning effectively in adult society upon their departure from high school.

RECOMMENDATION: THE COUNCIL RECOMMENDS THAT THE TOTAL VOCATIONAL EDUCATION NEEDS OF SECONDARY STUDENTS BE IDENTIFIED IN THE STATE PLAN AND THAT ANNUAL OBJECTIVES BE FORMULATED WHICH ARE DESIGNED TO PROGRESS TOWARD MEETING THE TOTAL NEED. THE ANNUAL OBJECTIVES SHOULD THEN BE INTERPOLATED INTO SUPPORT REIMBURSEMENT NEEDED TO ESTABLISHED PROGRAMS TO MEET THE STUDENT NEEDS.

THESE NEEDS SHOULD BE MADE KNOWN TO THE GOVERNOR AND THE STATE LEGISLATURE.

THE COUNCIL RECOMMENDS THAT STATE SUPERINTENDENT BENTON WORK WITH THE COUNCIL OF CHIEF STATE SCHOOL OFFICERS TO IDENTIFY STUDENT AND DOLLAR NEEDS ON A NATIONWIDE BASIS AND CONVEY THESE NEEDS TO THE U.S. OFFICE OF EDUCATION PERSONNEL AND THE RESPECTIVE CONGRESSIONAL REPRESENTATIVES.

GOAL II

THE EFFECTIVENESS WITH WHICH PEOPLE AND THEIR NEEDS HAVE BEEN SERVED

The extent to which peoples' needs have been served may be measured quantitatively and qualitatively. Quantitative considerations should give attention to the availability of programs, population concentrations or dispersion, and migration and commuting patterns within the State. Out-of-state migration patterns should also be considered, however, specific data on movements of out-of-state migrants is not available to the Council and was not considered in this report.

Qualitative measures of programs identify the degree to which operational programs are structured and conducted to meet the job preparation needs of those enrolled.

This unit of the annual report will address itself to both of the above issues.

QUANTITATIVE SERVICES AND PEOPLES' NEEDS

Recent newspaper articles have reported that the Iowa's out-migration rate over the past several decades has now declined and it is predicted that in the future Iowa may experience a population in-migration. It is also predicted that the population increases may occur in Iowa's more sparsely populated areas. These predictions are based on the recent interest that expanding industrial firms have demonstrated by locating new plants in the more rural areas of the state. These commuting, out-migration, and forecasts of rural industrial expansion suggest that secondary schools give greater attention to expanding their curricular offering to provide broader vocational education opportunities for their students.

Mobility:

Following is a review of population mobility patterns which exists in Iowa. A major social and economic characteristic of our "way of life" in the United States is the mobility of the population. Upon the termination of their education numerous young men and women choose to establish residence outside of their home community. Following is a review of migration within Iowa.

Migration:

One study based on the 1970 Census is entitled Migration Between State Economic Areas. State areas are defined as "relatively homogeneous divisions" of the state. They consist of single counties or groups of counties which have similar economic or social characteristics. See Map 6, Appendix D. The boundaries of these areas have been drawn in such a way that the State is subdivided into relatively few parts, with each part having certain significant characteristics which distinguish it from adjoining areas. The data are based on migration between 1965 and 1970.

The Iowa data from this source identifies in-migration and out-migration for each of Iowa's areas (Areas 1-6 representing groups of counties and A-F, standard metropolitan statistical areas).

The areas were analyzed as to economic and social characteristics. Two major generalizations can be made with respect to the areas with net in-migration. (1) Median family income, with one exception, is substantially higher than the state median, while that of four of the six out-migration areas is below the state median. (2) The percentage of employed persons engaged in manufacturing is also higher than the state median. Table 4, Appendix E, shows this information for the areas.

Manufacturing employment in Areas 6, D, E, and F is substantially above the state average of 20.0%. In Area C the percentage of employment in white collar occupations is 58.2 (state average, 42.9), reflecting the county's employment in insurance companies, etc. Conversely, employment in five of the six areas of out-migration is below the state average for manufacturing.

A definite pattern can be distinguished in migration patterns within the state, geographically from West to East and from rural to more urbanized areas. The movement also illustrates the economic principle that resources (in this case, human resources) move toward the point of highest return. These areas of higher income frequently are areas of manufacturing concentration.

Elsewhere in this report the issue of high youth unemployment (as identified in the State Plan for Career Education) is discussed. Areas of high youth unemployment exist in both rural and urban areas. Migration and youth unemployment appear to be too similar to be coincidental. The large numbers of recent graduates in the rural areas experiencing unemployment is probably due to lack of jobs in the rural areas while high youth unemployment in metropolitan areas may be due to the in-migration of recent high school graduates from rural areas who have none or few salable skills for the industrialized urban labor market.

CONCLUSION: SIGNIFICANT MIGRATION, HIGH YOUTH UNEMPLOYMENT, AND LIMITED STATE-WIDE AVAILABILITY OF A BROAD RANGE OF VOCATIONAL EDUCATION PROGRAMS APPEAR TO BE RELATED. HIGH SCHOOL STUDENTS WHO WILL TERMINATE THEIR EDUCATION AT THE 12TH GRADE SHOULD BE QUALIFIED TO MEET THE FUTURE WORK REQUIREMENTS OF THEIR HOME COMMUNITIES AS WELL AS THE CURRENT REQUIREMENTS OF THE COMMUNITIES TO WHICH THEY MAY MIGRATE.

Commuting:

A recent study of commuting, another form of mobility, is also relevant. "Commuting Patterns in Iowa," based on the 1970 Census, was prepared by the Iowa Employment Security Commission. Findings of the study are located in Appendix D, Map 7. Black Hawk and Linn Counties (Areas E and F) illustrate the in-commuting from adjoining counties. Black Hawk had net in-commuting of 2,680 persons (from Areas 4 and 5, both of which also had net out-migration). Linn had net in-commuting of 2,105 from these areas. The study found that inter-county commuting increased 70.2% between 1960 and 1970.

The reader should observe that a large amount of inter-county commuting also occurs in the predominantly rural counties. Considering the projected greater industrialization of rural areas one could assume the amount of inter-county commuting would increase in the future.

CONCLUSION: BECAUSE OF THE COMMUTING PATTERNS IT BECOMES APPARENT THAT YOUTH ENROLLED IN THE SECONDARY SCHOOLS IN THE RURAL AREAS OF THE STATE ARE IN NEED OF A BROAD RANGE OF VOCATIONAL PROGRAMS THAT PREPARE THEM FOR ECONOMIC INDEPENDENCE AS ARE THOSE PERSONS WHO RESIDE IN THE MORE DENSELY POPULATED AREAS OF THE STATE.

Program Availability:

Definite trends have been established in the extent to which cooperative programs have been established and expanded in Iowa secondary schools since the base school year of 1969-70. Graph 1, Appendix C illustrates that the medium and large size schools have expanded their cooperative programs offering more aggressively than the smaller schools. The percentage of change from the 1968-69 base year (Appendix C, Graph 2) more dramatically demonstrates the preceding conclusion.

Students' vocational education needs may be served by either preparatory (simulated), or cooperative type programs. Generally a broader range of preparatory programs are available to students in the medium and larger schools than in the smaller schools. A more detailed analysis of the availability of vocational programs, by school district size, would assist in identifying deficiencies in program availability. A recognition of these may be of value in formulating future activities to overcome the deficiencies.

Since students' needs can be served by preparatory programs as well as cooperative programs, the 29 counties in which school district enrollments are all under 1,400 were examined in this respect. The Department of Public Instruction directories for fiscal 1974 show that vocational agriculture is the only type of preparatory program offered in these counties. All counties have at least one agriculture program as follows (Map 8, Appendix D):

Number of Programs	Number of Counties	Total Programs
1	7	7
2	9	18
3	6	18
4	5	20
5	1	5
6	1	6
	29	74

Twenty-nine Iowa counties have school districts with enrollments of less than 1,400. Twenty-two of these 29 counties are located in areas with out-migration. The largest amount of out-migration is in 8 counties in Areas 1 and 3, (Map 6). Numbers of "out-commuters" are also high in several of these 22 counties. Two school districts in the 29 counties do offer cooperative programs, two in DE, two in OE, and one in T & I. It is likely that few of the schools in these counties would be able to provide specialty field cooperative programs by themselves. A joint effort, sharing coordinators, between the schools within a county or economic area could provide a more comprehensive educational opportunity for the secondary students in these schools.

Harrison county, not shown on Map 8, does not contain a school district with more than 1,400 students. An area school is providing four vocational programs in that county in addition to one vocational agriculture program which are operated by a local school district.

RECOMMENDATION: THE STATE BOARD SHOULD DIRECT ITS STAFF TO BEGIN WORKING WITH THE SCHOOL ADMINISTRATION IN THE COUNTIES IDENTIFIED IN MAP 8 TO ESTABLISH JOINTLY ADMIN-

ISTERED COOPERATIVE TYPE OR PREPARATORY VOCATIONAL PROGRAMS SO THAT BROADER CURRICULAR OFFERINGS ARE AVAILABLE FOR THE STUDENTS.

Cooperative Program Availability By School Size:

Only 16 or 4.2 percent of the 379 school districts with enrollments under 1,900 offer cooperative programs. The number has remained unchanged since fiscal 1969 with the exception of 1973 when it dropped to 15. The offerings (classes) in the school districts with enrollments of 1,900 to 3,799 increased from 50 to 64 or (28 percent) during the four year period. The average number of cooperative program offerings per secondary attendance center remained at 1.9.

In fiscal 1974 all 21 school districts in the enrollment range of 3,800 students (K-12) or above provided cooperative programs in their curricular offerings. This number increased from 19 in fiscal 1969. The total number of offerings increased from 74 to 91 or 30 percent. Offerings per school district increased from 3.7 to 4.3. This reflected an average increase from 2.4 to 2.7 programs per attendance center.

The incentive method of reimbursement of cooperative programs with Part G funds appears to have exerted little effect on the implementation of new cooperative programs in the smaller districts. It is estimated that 42.3 percent of the State's high school seniors attend schools with enrollments under 1,900. Accordingly, greater effort might be directed to extending cooperative education to a larger number of these students. The Council has identified 14 school districts with enrollments of 1,400 through 1,899 which show potential for program expansion or establishment of new programs. (See Appendix B, Paper 1, Page 15) Proposals for increasing the availability of cooperative programs in school districts with enrollments under 1,400 are presented in the Appendix B, Paper 1, (Pages 7 and 8).

The Council's analysis of school systems with K-12 enrollment of 1,900 to

3,799 students estimates a potential for implementing a minimum of 51 new programs. (See Appendix B, Paper 1, Pages 15-17)

Finally, the school systems with enrollments (K-12) of 3,800 or more students show the potential for the addition of 25 new programs. See Appendix B, Paper I, Page 17.

Student Opportunities State-Wide:

As of fiscal 1974, equal opportunities to participate in cooperative programs are not afforded students in the State. Although the estimated percentage of students participating in the large schools is smaller than that in the medium size schools, these students are advantaged in that programs are offered in all attendance centers. (This is not to say that if greater numbers of students elected to enroll for cooperative education in any one year that they could all be accommodated.) As a group, the medium size schools have higher percentage of students enrolled in cooperative programs; however, the programs are offered in only two-thirds of the schools.

The opportunities for the largest group of 12th grade students, those students attending Iowa's smaller schools, to participate in a cooperative program are marginal at best. Frequently the smaller schools are located in lower-income areas, in which case it is particularly desirable that students be afforded opportunities for preparing for higher-income jobs to which they may migrate or commute upon graduation. The 29 counties referred to earlier, in which all school districts have enrollments below 1,400, are all counties with median family income below the state median (1970 Census data). The frequency distribution of the 29 is:

County Median Family Income as Percent of State Median	Number of Counties
90 - 99 %	5
80 - 89	16
70 - 79	4
60 - 69	4

An estimate of the number of 12th grade students, statewide, not participating in either preparatory (simulation) or cooperative programs and who will not complete a four year college education can be derived as follows:

Enrollments reported in OE Form 3138, 1973 Annual Report, were adjusted to show 12th grade only. Both Agriculture and Home Economics are offered throughout the senior high years and are subject to decrease by natural attrition. Accordingly, 20 percent of total enrollments was used as 12th grade enrollments. Distributive and Office Education enrollments can be considered as all 12th grade, while Trades and Industry was reduced by one-third to eliminate students below the 12th grade. Adjusted figures are:

Agriculture	2,978
Home Economics	6,453
Office Education	1,127
Distributive Education	1,745
Trade and Industry Education	2,133
Total	14,436

Subtracting the estimated 14,436 12th grade students enrolled in preparatory and cooperative programs from the estimated number of 12th grade students:

Total estimated 12th grade students	54,196
Estimated senior enrollment in preparatory and cooperative programs	- 14,436
	39,760
Estimated number who will complete four-year college curriculum*	- 15,175
	24,585

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* Calculated as 28 percent of 12th grade, figure from A Profile of Iowa College and High School Students, a 1969 research study for the Higher Education Facilities Commission prepared by Thomas Wolff Associates.

Some of these 24,585 students will attend some type of postsecondary institution, public or private, for less than four years. This leaves a sizeable number of students yet to be served through a secondary vocational education program. The Council's study of the potential for growth of the cooperative program (See Appendix B, Paper I) identifies the potential number of school districts that should implement cooperative or preparatory programs, either individually or by joint efforts among adjacent districts.

It is recognized that the preceding is an arithmetical estimation and may be questioned by specialists in statistical analysis. It does, however, provide an approximation of the potential need for new vocational programs. Approximately 37% of the high school seniors who are in need of vocational program services are receiving those services.

RECOMMENDATION: WHILE IT WOULD BE SIMPLISTIC TO RECOMMEND EXPANSION OF VOCATIONAL PROGRAMMING, IT MUST BE RECOGNIZED THAT THERE ARE NUMEROUS REASONS WHY PROGRAMS HAVEN'T BEEN PROVIDED PREVIOUSLY. IT IS NOW RECOMMENDED THAT THE READER REVIEW AND TAKE ACTION ON THE OTHER RECOMMENDATIONS CONTAINED IN THIS REPORT. THE COUNCIL BELIEVES IF THE NECESSARY PRELIMINARY STEPS ARE TAKEN, IOWA WILL INCREASE ITS PROGRESS TOWARD PROVIDING AN EDUCATIONAL OFFERING MORE NEARLY KEYED TO STUDENT NEEDS.

COOPERATIVE PROGRAM QUALITY

Teacher Coordination

The Council observed that many teacher coordinators visit student training stations approximately every nine weeks. There was a general impression that the number of periodic job site visits by teacher-coordinators should be improved. In some cases this infrequent student supervision may be attributable to a high student-coordinator ratio. (In one case, a 25 to 1 ratio is considered a half-time load. In another, the coordinator was provided two periods a week for coordinating 10 students.) With respect to coordination time, the Career Education Handbook of the Department of Public Instruction states: "When a cooperative program utilizes a portion of the day for on-the-job training the coordinator should have one-half hour per student per week coordination time. The assigned coordination time should agree with the time the students are working." (pp.22-23)

RECOMMENDATION: IT IS RECOMMENDED THAT THE DEPARTMENT OF PUBLIC INSTRUCTION CHANGE THE STATEMENT IN THE HANDBOOK (SEE ABOVE) TO "THE COORDINATOR SHOULD VISIT THE TRAINING STATION AT WHICH THE STUDENT IS LOCATED EVERY TWO TO FOUR WEEKS." THIS WOULD PROVIDE FLEXIBILITY FOR DIFFERENCES IN EMPLOYER SITUATIONS AND STUDENT LEARNING ABILITIES. IN ADDITION, IT WOULD ALLOW FOR DIFFERENCES IN NUMBERS OF STUDENTS LOCATED AT A TRAINING STATION, TRAVEL DISTANCE BETWEEN THE SCHOOL AND TRAINING STATION, AND THE LIKE.

An inconsistency appeared in several cases in comments by teacher-coordinators and students as to visits made by the former to students' training stations. The students reported less frequent visits. To avoid misunderstanding of this type, the coordinator should maintain a record of his visits to training stations. In addition, a written record of the coordinators visit to the training station would serve as a valuable resource document for individualized counseling sessions with students. This record would also be valuable to the school principal for instructional supervision purposes.

Related Instruction

According to experts in the field, related instruction provided to cooperative students should include two components. These include specific related instruction in which the student, under classroom supervision, studies instructional materials which provide the "know why" or theory for the skills he is learning on the job. General related instruction increases the students' knowledge of such subjects as social security, general job safety, unemployment insurance, workmen's compensation, and employer-employee relations.

Field observations reveal that excellent general related instruction is frequently provided while in too many cases specific related instruction is given little attention.

> RECOMMENDATION: IT IS RECOMMENDED THAT THE DEPARTMENT CONSULTANTS EXPAND THEIR ASSISTANCE TO THE TEACHER-COORDINATORS WITH THE OBJECTIVE OF IMPROVING THE QUALITY OF SPECIFIC RELATED INSTRUCTION.

Administrators' Responsibilities to Cooperative Programs

Numerous secondary school principals expressed a lack of understanding of the elements which are typical of a quality cooperative program. It also became apparent that in the school systems where coordinators made few visits to student training stations and/or where little attention was being given to specific related instruction that the high school principal was not aware that the situation existed.

> RECOMMENDATION: IT IS RECOMMENDED THAT DEPARTMENT OF PUBLIC INSTRUCTION PERSONNEL INFORM THE PRINCIPALS OF

SCHOOLS, IN WHICH COOPERATIVE PROGRAMS ARE OFFERED, OF THE CHARACTERISTICS OF A QUALITY COOPERATIVE PROGRAM, SO THAT THE LOCAL PRINCIPAL MAY BE MORE EFFECTIVE IN HIS SUPERVISION OF THAT PROGRAM AS PART OF THE TOTAL CURRICULUM SUPERVISION RESPONSIBILITY.

Student-Job-Placement

During the Council field visits to schools the Council was informed by students that some were placed in jobs which they had held prior to their enrollment in the cooperative program. Further conversation with the students revealed that some of the jobs involved a limited number of low level skills that had been mastered early in the school year or prior to their enrollment in the cooperative program. The Council suspects that many of the students were capable of a higher level of skill development. It is possible that for some of these students the cooperative program has become a method of earning money on school time and gaining some credit toward graduation.

The Council recognizes that some students aspire to jobs and have the talents and abilities for which a limited number of skills and technical knowledge are required. Some students with whom the Council visited were learning these types of jobs. Student training periods of less than a year were not observed in any of the twelve schools.

Training Agreements and Outlines

Other findings from the field visits reveal that some schools utilize a written training agreement which is signed by the employer, the student, the school, and the parent. The purpose of this instrument is to emphasize that the released time the student has from school is for educational purposes. The use of the training agreement is not as universal as it may have been in the twelve schools visited.

Another document observed in a limited number of schools during the Council field visits is the training outline. The purpose of the training outline is to identify the skills the employer will teach the student-learner during the course of the year and to provide assurance to the employer that the school will provide the student with instruction in job theory. The Council observed very few instances where the training outline was used among the schools visited.

It appears that there is room for significant improvement in the quality of instruction in many cooperative programs. One device for improving instructional quality is the universal use of training agreements and training outlines.

RECOMMENDATION: COOPERATIVE PROGRAM TEACHER-COORDINATORS SHOULD BE ENCOURAGED TO DEVELOP A TRAINING OUTLINE COOPERATIVELY WITH THE EMPLOYER FOR EACH STUDENT. ADMINISTRATORS SHOULD BE ENCOURAGED TO HOLD THE TEACHER-COORDINATORS ACCOUNTABLE FOR THE DEVELOPMENT OF THESE TRAINING OUTLINES.

WORK STUDY PROGRAM

Based on student participation in both secondary and area schools, the Work Study Program as it operates in Iowa can be considered relatively successful. (See Graphs 4 & 5, Appendix C for increases in participation through fiscal year 1973.) Its continuation as a viable program, however, may be subject to question.

Earnings by students employed under the program are subject to the restrictions or ceilings stipulated in PL 90-576. At the same time that income from public employment has been held stable, the possible earnings from employment in the private sector have increased, in some cases substantially. Accordingly, it may be more advantageous to the student to find employment in the private sector.

Although employment of low-income students in the private sector achieves the same major goal as the use of work study funds, that is, it enables the student to remain in school and either commence or continue a vocational education program, it does not accomplish the second goal of providing improved services to the local community.

It is recognized that Iowa's rate of unemployment is traditionally lower than that of many states and that, even in periods of "high" unemployment the employment opportunities for students in the private sector are greater than in many states.

RECOMMENDATION: IT IS RECOMMENDED THAT CONGRESS GIVE SERIOUS CONSIDERATION TO AMENDING THE LAW ESTABLISHING THE CEILINGS ON EARNINGS FROM THE WORK-STUDY PROGRAM. ANY AMENDMENT SHOULD SPECIFY THAT THE PREVAILING MINIMUM WAGE BECOME THE CEILING FOR HOURLY WAGE UNDER THE WORK-STUDY PROVISIONS OF THE LAW.

During Council field visits it was revealed, one case, that a student(s) not enrolled in a vocational program was receiving work-study funds.

RECOMMENDATION: THE DEPARTMENT OF PUBLIC INSTRUCTION SHOULD REVIEW ITS ACCOUNTING PROCEDURES TO ASSURE THAT FEDERAL FUNDS ARE NOT MISUED BY LOCAL AUTHORITIES.

GOAL III

THE EXTENT TO WHICH RECOMMENDATIONS CONTAINED IN THE COUNCIL'S 1973 ANNUAL REPORT HAVE BEEN IMPLEMENTED

One of the topical foci of the Council's 1973 report dealt with the extent to which the three State Universities, governed by the Board of Regents, have implemented the career education concept in the pre-service programs of teacher education. Other elements of the report related to actions which could be taken by the State Board of Public Instruction which might precipitate universal implementation of the career education concept at all levels of education in the State including pre-service and in-service teacher education.

Recommendations one and three identified the need for development of a "State" definition for career education and the need to revise State curriculum guides to include the career education concept. The extent to which these recommendations have been implemented may be measured by reviewing the material quoted from the 1975 State Plan for Career Education which follows.

Recommendation two suggested the need for a plan to infuse the career education concept into the ongoing teacher education activities in the colleges and universities in the State. The Council is not aware of any specific,.comprehensive, or unified actions by the State Department of Public Instruction which has been taken to implement this recommendation. The Council is pleased to report that it recently played a catalytic role which motivated three, high level, State university officials to become interested in implementing the career education concept in the teacher education programs in their institutions. State Superintendent Benton is aware that the remaining action to be taken is of a cooperative nature between the two state education governing boards and their staff.

Recommendation four suggested the need for a working state coordinating committee to plan for universal implementation of the career education concept. The following explains activities which are in progress to implement this recommendation.

Following is a listing of the State Board's actions and reactions to the Council's 1973 recommendations as contained in the 1975 State Plan for Career Education.

1. Recommendation:

   A State definition for the term Career Education be developed by June 1974 which is applicable to all levels of education and understandable by the lay public. This definition should be developed by a broadly based group of knowledgeable persons representing all levels of education, business, industry, the legislature, and the general public.

   Comments:

   A State definition for Career Education is in the process of being developed by the State Department of Public Instruction.

2. Recommendation:

   A plan be developed by June 1974 to coordinate the efforts of all universities and colleges in the state to infuse the career education concept in all undergraduate school teacher and administrator preparation programs.

   Comments:

   It is not anticipated that a new "master-plan" would be devised to accomplish this end. The planning for the preparation of personnel, which is "built" into the annual and long-range State Plan for the Administration of Career Education, is intended to accomplish the infusion of the career development concept. Communications and suggested program activities from groups, such as the State Advisory Committee on Teacher Education and Certification, and the Advisory Committee for Career Education Professions Development (Cadre) serve to stimulate and "plant the seeds" which will provide the growth of career education within programs that prepare educational personnel.

3. Recommendation:

The remaining, unrevised, State curriculum guides be rewritten by June 1975 to include the career education concept. These new curriculum guides should be reproduced for distribution to elementary, secondary, and area schools, and regional media centers, and should be placed in university and college curriculum laboratories for reference.

Comments:

Attention is given to incorporating the career education concept in curriculum guides as they are developed and revised. If reference is made to all applicable curriculum guides at the state level, June 1975 is an unrealistic date for the accomplishment of the task recommended. Dissemination of curriculum guides has been and will continue to be made to elementary, secondary, and area schools, regional media centers, and university and college curriculum laboratories as appropriate.

4. Recommendation:

A working state coordinating committee be activated by June 1974 to develop a plan which will encourage universal implementation of the career education concept in all schools in the state, including elementary, secondary, and area schools, and the public and private universities and colleges.

Comments:

Administrative consideration is being given to approaches for implementing the career education concept statewide. Ongoing exemplary career education projects pertain to various facets of planning for and implementing the career education concept in schools at all educational levels. Models for articulation procedures and implementation are expected outcomes of these projects. Information for approaches to statewide implementation is being provided as exemplary project activities are evaluated and reported.

APPENDIX A

SUMMARY INFORMATION

Gleaned From

Field Visits to Twelve

Local School Districts

during the period

from

April 18 through May 8, 1974

by the

Iowa Career Education Advisory Council

Des Moines, Iowa

Field Visit 1
April 30, 1974
School System A

Population, Economic, and School District Information

The school system services a population of young people from a mixture of rural agricultural and small town suburban communities near a large metropolitan area. Community population is reported to be approximately 350 persons while the school system enrollment of K-12 is 3,400. No major industries are located within the community in which the high school is located. The community can be classed as a typical "bedroom" community. The distance to the major metropolitan center is less than 10 miles. The school system provides cooperative type vocational programs in all four occupational fields plus work study.

Information Gained From The Visit

Administrators:

- The school system has been in existance as a reorganized school district for slightly more than a decade.
- The philosophical orientation of the school system since its reorganization has changed from the goal of preparing all students for "white collar" jobs to one which is more realistic for the population that the school is serving and the employment trends typical in Iowa and in the nation.
- Teachers who have been recently employed by the school system have demonstrated that the colleges do not prepare teachers to teach the career education concept. The local school system must provide a retraining for these teachers.
- It is difficult to sell the concept that one of education's functions is to prepare the student for entrance into the world of work.
- Due to the rapid development of the school, advisory committees have not been used. The committees that have been organized have been consulted on an "as needed" basis. There is better responsiveness to this type of situation.
- Efforts are being expended to involve elementary teachers in the career education concept.
- Younger teachers generally have a better attitude towards the world of work.
- State financial support for vocational programs does not defray the exceptional cost of the program. The administration and the school board has supplied the majority of support for the vocational programs.
- The school conducts a follow-up of all students every five years. The results of this follow-up reveal that at the end of three years the students generally are not employed in the area for which they receive training, however, by the end of five years they have found employment in the area for which they received training.
- The local school administrators feel there is a need for more directive assistance from the State Education Agency. There appears to be a need for the DPI to encourage the balance of vocational programming between high schools and area schools.
- The school system provides a work study program for the Educationally Mentally Retarded student. This is a cooperative type of program with the individual students being employed in the private sector of business and industry.
- The school system has been involved in the Governor's Youth Opportunity Program. Rapid response to the needs of the students is possible with this program.

- Considerable effort had been expended by local school staff in developing project proposals for the work study program. Constant advice was offered by the State Education Agency on needed changes to the proposal and following this new guidelines were prepared which required further change. For this reason the school system decided not to use staff time for the development of any additional proposals.
- There appears to be too much shared responsibility for decision making on local school issues by personnel in the Department of Public Instruction. One individual should be responsible for the final decision making.
- School administrators in increasing numbers are recognizing the value of work preparation as part of the school curriculum.
- It has been observed that other school systems which have offered programs admit a reduction of quality of instruction. This type of program becomes a work experience program and not the job training program.

Teacher-Coordinators:
- Some difficulty may be experienced in the future in locating training sites for students because of the increase in the minimum wage.
- Student coordinator ratios range from 9 to 48 per coordinator depending on the field of the program.
- The coordinator of the trade and industrial cooperative program prefers that the students have enrolled in industrial arts previously for exploration purposes.
- The school also conducts a career day which provides an opportunity for exposure to a particular job for the student.
- Distributive education is offered in the junior year and the student also has the opportunity to enroll in the senior year.
- Youth organizations conduct their meetings on school time.
- Approximately one-third of the seniors are enrolled in the cooperative program.
- Not all youth organization emphasize leadership development skills. Some place emphasis on competency and job skills.
- Because of the close proximity to a large metropolitan area the coordinators in this school system meet periodically with the coordinators of other school systems in the geographic area so that a competitive circumstance does not occur in locating training stations.

Students:
- The students reported that the coordinators visit their employers once every three or four weeks.
- The majority of students would not enroll in a cooperative program if they would not be paid for their services.
- Office education and distributive education students have a verbal training agreement. The trade and industrial students have a written training agreement but no training outline.
- The majority of students enrolled in a cooperative program will pursue some type of job after school.
- Most specific related instruction is gained through the on-the-job experience.
- Some students are of the opinion that the training period is too long for the skills to be learned.
- Several students are able to find employment in large firms in what is commonly considered as hazardous occupations.
- The majority of students prefer to work in firms employing twenty-five or more persons.
- Students are very enthused about the vocational youth organization and feel that the community service portion of that activity is very important.

Field Visit 1
April 30, 1974
School System B

Population, Economic, and School District Information

The school system services a population of high school students in a suburban community adjacent to a major metropolitan area with very few students from a rural segment of society. The suburban community is basically a "bedroom" community for the adjacent metropolitan area. The student population in the school district is nearly 7,000 students. The industry within the community is comprised of a number of small businesses and shopping centers. The cooperative programs offered by the school system include metal shop, wood shop, and power mechanics, all of which are very traditional type programs placing major emphasis on manipulative skills and not keyed to current concepts of developing an awareness of and exploration in the world of work.

Information Gained From The Visit

Administrators:

- The high school offers a work-for-hire program for the individual who has sufficient credits to graduate at the end of the first semester of the senior year. Instead of graduating the individual would enroll in some additional course work during the last semester and work half day during that period of time. No credit is given for the work-for-hire program.
- The trade and industrial cooperative program is not offered to the students because of the availability of vocational trade and industrial programs in a neighboring school district. Fourteen students are sent to the neighboring school district with their tuition paid by the sending school district. This number has remained static in recent years.
- The number of students enrolling in college has been increasing each year. Approximately twenty percent of those attending college complete college.
- The high school principal is not aware of the number of dropouts from his institution.
- A work study program is provided for the retarded children.

Teacher-Coordinators:

- The coordinators in the metropolitan area meet periodically so as to avoid multiple contacts with the same employers.
- Perspective students receive an orientation to the particular cooperative program over a period of four weeks by meeting with the coordinator one morning each week for a period of one hour.
- The academic abilities of most cooperative students are slightly below the rest of the students in the senior class.
- Exploratory courses are available for secondary students prior to their enrollment in a cooperative program, however, these courses are not required prerequisites.
- When the cooperative program was organized an advisory committee was established, however, following the first year of operation committee meetings were suspended and the coordinator contacts members of the advisory committee on an individual basis.
- Employer-employee banquets are sponsored by the school for the purpose of expressing appreciation to the employers for providing training stations to the students.

- Staff opinion is that students from this suburban district do not enroll in vocational programs offered by an adjacent school district. The reason for this is the lack of availability of bus service from the suburban district to the metropolitan district for the vocational students.

Students:

- The students report that the coordinator visits the training station approximately twice per month.
- The student youth organization not only serves to develop leadership skills but they also teach the assumption of civic responsibility through such activities as providing a Christmas party for twenty-five needy children of the community.
- Students attend school fifteen hours per week and work on the job no less than fifteen hours and no more than forty hours per week.
- The students are of the opinion that more emphasis needs to be placed on job related learnings.
- Approximately 2,000 students are enrolled in the high school and five hundred are in the graduating class. Students are of the opinion that more emphasis needs to be placed on careers in the community.
- Most of the students enrolled in the two cooperative programs would enroll in the program if there were no pay for the school hours that they would normally be in attendance at school.
- Approximately half of the students would like to remain in employment in the same field in which they are taking their cooperative training but would like to advance in that field.
- Transportation to the job is of little concern since three-quarters of the students attending the school have cars.

Field Visit 1
May 1, 1974
School System C

Population, Economic, and School District Information

This small rural community is located approximately fifteen miles from a major metropolitan center in the State. The community population is approximately 1,600 with the enrollment in the school from K-12 approximately 600. A very small number of industries are located in the community. The entire physical plant of the school system is located on one site in the community. The school system is not reported to offer any reimbursed vocational cooperative programs. The school presently enrolls approximately 250 students in grades 9 through 12.

Information Gained From The Visit

Administrators:

- The school does conduct a work study program which is not funded with vocational funds.
- The counselor in the school system acts as coordinator for the program. Actually ten boys and two girls are involved in the work study program which is elective. The counselor does not have sufficient time to fulfill his role as a counselor and act as a cooperative program coordinator.
- The counselor does teach a related class, the content of which was not identified.
- The majority of the students are employed in the neighboring metropolitan area with only two students employed in the community in which the school is located.
- The students work a minimum amount of twelve hours per week in their cooperative program.
- Student transportation to the job training site appears to be no problem.
- No prerequisites are in force for enrollment in the cooperative program.
- School also conducts a work employment program, the function of which is to place students in part time temporary employment, basically in the community.
- The coordinator-counselor of the program visits with each employer of the student approximately each nine week period.
- The students receive two credits towards graduation for enrollment in the work study program.
- The school board of this system has passed a rule that the student must attend four years of high school.
- The summer institute of two weeks or less duration for the counselor to upgrade his skills in vocational coordination would be desirable.
- The administration of the school is of the opinion that assistance is needed in implementing the career education concept. There is a need for guidelines for implementation and for a definition of the term. There is also a need for curriculum guides which the local school will either accept or reject.
- The school is not in a position where it can develop its own career education curriculum.
- The Occupational Safety and Health Act presents problems in terms of finding employment training stations for students in the work experience program.
- Many students are ready for cooperative type experiences beginning in the ninth grade utilizing a limited exposure rather than a full year program. Often times industries and businesses do not have the time to service students for exploratory purposes as suggested above.

- A multi field coordinator could be employed by the school district for a half to three-quarter time work load. This would require the addition of space for classroom instruction, however, this could not be provided unless reimbursement for these expenses were available.
- Sixty percent of the graduates go on to some kind of post high school educational program.
- The local school does not think its feasible to send high school students to the area school campus for institutional type vocational training. Transportation is the largest single problem. Because of distance factors involved, too little time would be spent by the student in a preparatory training program.
- The proposal to reimburse a cooperative coordinator with a diminishing reimbursement basis does not impress the local school administrator because of shortage of funds.

Field Visit 2
May 7, 1974
School System A

Population, Economic, and School District Information

The school system is located in a community of slightly more than 7,000 population. The nearest major metropolitan center is fifty miles from this community. The Development Commission directory lists more than fifteen industries in the community. The community is a trade center for the surrounding agricultural area. The student population in the school district is slightly more than 2,000 students from grades K-12. The school system does not provide a vocationally reimbursed cooperative program for its students.

Information Gained From The Visit

Administrators:

- The school administration revealed that approximately five girls enrolled in a typing and shorthand program are involved in a cooperative type program during their senior year. They receive on-the-job training using about one-half of each day for this experience.
- The agriculture program does use a cooperative experience when agricultural occupations employment experience is desired by the student.
- The school also provides a work study program for special education students.
- The area school servicing the school district has located an attendance center in the community to provide preparatory type vocational programs for the high school students within a reasonable commuting distance in two occupational areas. The program is newly established this year and there is some problem in finding students who are interested in enrolling in the occupational programs.
- The outlying participating schools have transportation problems in bringing their students to the community.
- Approximately fifty-five percent of the high school graduates from this institution enroll in a four year college while twenty percent attend an area school on the post secondary level.
- The school has some interest in establishing a cooperative program, however, it will be necessary for them to hire a coordinator for the program because currently employed teachers have a full time teaching load.
- The schools greatest interest is in a multi-field occupational program.
- The impediment to employing a coordinator is the lack of funds to pay the salary.
- A diminishing reimbursement system presents a problem for the local school in that they cannot generate the local matching money as the percent of dollars are reduced and salaries increase.
- The area school program for secondary students will be changed every two years to make allowances for saturation of the local labor market.
- The classes offered by the community colleges for secondary students yield two high school credits toward graduation.
- The practical arts exploratory programs offered by the local school district are showing an enrollment increase. This is due basically to teacher attitude.
- The community is not really aware of the potential need for an expanded vocational program either of the cooperative nature or the preparatory type.
- There is some question, by the administration, as to whether there is sufficient training stations in the community to justify a cooperative

program.
- Personnel in the area school center used a student interest survey to identify the type of program that should be located in that community.

Students:
- Visits with students were not scheduled since the school did not offer a reimbursed vocational program.

Teacher-Coordinators:
- Teachers were not visited because of the small size of the cooperative type program that is offered by the school.

Field Visit 2
May 7, 1974
School System B

Population, Economic, and School District Information

This school system is located in a community with a population of approximately 1,500 persons. It's geographic location is approximately 35 miles from a major metropolitan center and approximately 15 miles from the nearest trade center for this agricultural area. The school district population from K-12 is slightly more than 600 students. Recently the high school was moved into a new facility that is well planned and pleasingly appointed. Plans are in motion to relocate the last outlying elementary attendance center to the largest community in the school district. There are approximately one hundred students enrolled in grades 11 and 12 in this school system. The school district population has been stable and is projected to continue to be stable.

Information Gained From The Visit

Administrators:

- A limited number of training stations exist in the community. Those employers located in the community are not interested in taking students from a cooperative program.
- The majority of training stations available in the community are in the office occupations field.
- Transportation distances to other communities to utilize training stations there are impractical.
- Enrollment in industrial arts programs is nearly stable while home economics enrollment is increasing and agriculture instruction is provided to students by transporting them to a nearby community.
- The local school system has attempted to implement the career education concept. This was motivated by the county work shop conducted for teachers several years ago.
- The local school district plans to utilize its inservice work shop next year to focus on the continuing development of the career education concept in the total school system.
- The school has had the opportunity to utilize funds from the neighborhood Youth Corps program to provide financial assistance to low income students. This program has demonstrated the flexibility of responding to emergency situations rapidly.
- The school system has also been able to organize a private trust fund through donations from the community to provide aid to needy students.
- Some conversation has taken place between surrounding local school superintendents on a possibility of providing an expanded vocational offering cooperatively among the local school districts. No action has been taken.
- An annual follow-up over the past five year period reveals that approximately one-half of the graduates of the local school system go on to post secondary collegiate programs while another 20 percent enroll in some type of vocational and technical programs. The remaining 30 percent go to work, become homemakers, and the like. There is a trend towards less emphasis on college enrollment and greater emphasis on vocational and technical enrollment.
- The community college servicing this local school system has established three preparatory vocational programs in a community approximately fifteen miles away.
- Currently eight students from the local school district are enrolled in these programs and it is projected that ten will be enrolled next year.

Field Visit 2
May 8, 1974
School System C

Population, Economic, and School District Information

The school system is located in a community of approximately 5,000 population. The community serves a trade area in a predominately agricultural sector of the state. Population of the school district from grades K-12 is approximately 2,500. Exploratory programs available in the school include industrial arts, home economics, and office education type programs. The high school building is modern structure and the exploratory laboratories are well equipped. Student interest in exploratory programs is great. Between ten and fifteen industries are located in the community. In addition to the cooperative and home economics programs the school also offers agriculture education.

Information Gained From The Visit

Administrators and Coordinators:

- 236 students are enrolled in the senior class of which slightly more than half are enrolled in some type of cooperative program including T & I, office education, or agriculture occupations employment experience.
- Sixty-eight percent of the students go on to some type of post secondary education program.
- The community strongly supports the cooperative type program.
- Two credits are granted for enrollment in a cooperative program.
- The local school dropout rate is 1.6 percent whereas the state average is 1.86 percent.
- School administrators are of the opinion that the cooperative program does not prevent school dropouts.
- Financial aid from the cooperative program is an attraction for many students to enroll in the program.
- The cooperative programs utilize 62 different training stations within a fifteen mile radius of the community. These employers provide training in forty different occupations.
- The cooperative program includes instruction which mandates that the individual students must establish a savings program.
- Providing instruction of employer-employee relations is sometimes difficult.
- Often the students enrolled in a cooperative program are left out of extracurricular school activities.
- The cooperative coordinators strongly suggest that a son or daughter not be placed in the family business for their employment training.
- Student evaluation is a cooperative venture including the school and the employer.
- The school does not offer distributive education programs and therefore students with interest in distributive education are enrolled in the trade and industrial program.
- Those students who have graduated from school and go on to post secondary vocational programs often dropout at the end of the first semester to find employment. The reason for this appears to be that post secondary vocational programs are not sufficiently flexible to recognize advanced placement in a program for skills previously learned.
- The State diminishing return reimbursement principle is not well received by the school administration since it does not recognize the continuing exceptional cost of the program.

- Transportation time to the attendance center is estimated to be twenty minutes.
- The local school system pays the tuition for its students attending the area school center. This tuition amounts to four hundred and five dollars per student and is reimbursed by the state at a rate of 80% during this first year of operation. The average annual cost for educating a student full time in this school district is nine hundred dollars per year. Based on these estimated figures, this means that the local school district receives approximately three hundred twenty dollars from the state for each student enrolled in a vocational program which in turn releases three hundred and twenty dollars from its budget for other purposes within the school district.

Students:
- Students were not visited at this school district.

Teacher-Coordinators:
- No teacher-coordinators were employed by this school district.

- Area schools may have caused reimbursement to secondary school vocational programs to decline. There appears to be a direction from the state education agency to emphasize exploratory activity at the secondary level and reduce the number of secondary vocational education programs. This is implied by the funding practices.
- Career education has been implemented to a degree in the elementary schools but full fledged implementation won't occur until there is some type of coordination for an ongoing inservice training program for elementary teachers.
- The opinion of the school administrators is that the area education agency should help establish inservice training for the career education concept.

Students:
- Students are required to take the general aptitude test battery to identify their interest in an occupational area. They are then required to apply for enrollment in the cooperative program. This technique provides training in applying and interviewing for a job.
- The school also conducts a pre-employment training session,including other job seeking skills, for the students.
- Those enrolled in the cooperative programs are encouraged to participate in other school activities.
- The majority of cooperative students would enroll in the program even if salaries were not paid for work during school time.
- Some students indicated that related instruction materials were not available in the occupation for which they were receiving training.
- A training outline is not part of the training agreement. Student interest negates the need for a training outline.
- Student observations reveal that the coordinators visit the training stations between every six and nine weeks.
- The state youth organization activity, particularly those of the state contests in leadership development, are considered to be of great value to the students.
- The students feel that they should be released from school for their work training at an earlier hour during the day.

Field Visit 3

April 18, 1974
School System A

Population, Economic, and School District Information

Located in a large community, population excess of 100,000 with multiple high schools in the system. Total school system enrollment is approximately 18,000. Programs available include distributive education, office education, trade and industrial, and work study including Governor's Youth Opportunity Program.

Information Gained From Visit

Administrators:

- Some frustration is experienced since administrators are told by coordinators certain actions cannot be taken because of state and federal laws and regulations.
- Considerable concern was expressed because enrollees are allowed in cooperative programs only if they have a C average or better and do not have police or discipline records in the school.
- Followup of graduates is accomplished with a four year cycle, however, no use of data is made for educational program planning.
- Directors of secondary education and high school principal do not see the regional consultant from the Department of Public Instruction.
- High school principal and administrator would like a DPI review of the vocational programs.
- Sufficient time is provided to the coordinators for coordination between school and employer training station.

Coordinators:

- Students are made aware of the cooperative program through visits by coordinator with the junior class.
- Students complete an interest inventory including credits earned for graduation, attendance, and tardiness records.
- Exploratory activities are available to students during the eighth grade through quarterly instruction in home economics, industrial arts, business education, and art.
- Exploratory opportunities are available in senior high school through institutional type programs such as business education, industrial arts, and home economics.
- Most students do have part time jobs prior to their enrollment in cooperative programs.
- Some handicapped students are enrolled in the regular cooperative program.
- Students critique the value of the cooperative program, giving consideration to the on-the-job experience and the school related instruction.
- Some related instruction materials are in short supply because of school budgetory problems. Often times students purchase their own technical manuals.
- Student coordinator ratios generally are 25 to 1 for half time load.
- Health occupations exploration is provided in 12th grade on a cooperative basis in occupations including potential physicians, dentists, nursing, and the like.
- Advisory committees were recently formalized and have met. Purpose is to develop communications between the school and industry concerning the philosophy of the program, its purposes, and the like. Employers only are represented on the committee, no students or employees hold membership. Some committees meet twice a year.

- Training agreements are signed by employer, parent, student, and school but do not include a training outline of skills and knowledge to be learned.
- Coordinators are able to place some students with large employers, however, usually in nonhazardous occupations.
- Many students enrolled in cooperative programs lack basic skills in communications, math, and the like.
- There is lack of articulation between the instruction in the high school and instruction in the area school. Instruction is duplicated between high school and area school. Apparently opportunities are not available for advanced placement in area school programs based on students demonstrated competence.
- Occasionally some problems are experienced in placing students on the job because today employers can hire a four year college graduate for the same wages and to do the same work as a high school cooperative student.
- Significant student interest is expressed in following social work type of training. This is particularly true of blacks. Some difficulty is experienced in locating on-the-job training locations in this field.
- Many students learn social skills while involved in on-the-job training.
- Governor's Youth Opportunity Program is designed to prevent drop outs while Neighborhood Youth Corps is designed to provide financial assist to the student of a low income family.
- One objective of all cooperative type programs is to teach basic work habits to students.
- Most on-the-job experiences occur after the normal school day.
- All employment is with public supported agencies.
- Students are allowed to work ten hours per week during school year, 20 hours during the summer.
- 50% of the students enrolled must be from ADC families and the remainder may be experiencing some other financial or socially depriving conditions.
- County directors of social services certifies the eligibility of the persons enrolled in this program.

Student Comments:

- Most students find their own job for cooperative program and many have been employed previously in the same occupation by the same employer.
- The specific related instruction is often provided by the employer during working hours.
- Classroom related instruction is mostly of a general nature (social security, workmans compensation, handling personal finances, job safety, and the like).
- Salaries paid the student are the deciding factor in the enrollment in cooperative programs. If it were not for the pay the students would not enroll in the cooperative program.
- Most students do not plan to follow their present occupation after graduation.

Field Visit 3

April 18,1974
School System B

Population, Economic, and School District Information

- School is located in very small community within 19 miles of major metropolitan area. Community population 794. Total school enrollment approximately 720. Ninety-four students are enrolled in grades 11 and 12.

Information Gained From Visit

Administration:

- Records of reimbursed and approved cooperative vocational education programs reveal that this school system does not offer a cooperative program. The high school principal reported that an approved but not reimbursed work release program (cooerative type) is offered by the school system. This program is offered to students 16 years of age or older.
- Students in the program are placed with manufacturing, agriculture related, construction, and machinery repair companies.
- A work-study permit is signed by the student, parent, and employer and kept on file in the school.
- Initially the high school principal acted as coordinator for the program, however, with the press of other work he has not visited the employers since early in the school year, nor is there any related instruction class.
- No credit toward graduation is given to students for the program.
- Teachers in the system are beginning to implement the career education concept.
- Exploratory instruction is available in Industrial Arts and Home Economics.
- Pregraduation surveys of high school seniors reveal that 60% plan to pursue some kind of post secondary education, while the remaining will farm or work in the nearby metropolitan area.
- The school administrators have been made aware of the career education concept during the new administrators conference and through numerous mailing from the Department of Public Instruction.
- The school system plans to employ a coordinator for the work release program next year.

Students:

Visits with students were not conducted.

Coordinators:

No coordinators were employed.

Field Visit 3
April 19, 1974
School System C

Population, Economic, and School District Information

The school is located in community with approximately 7,000 population while the approximate total school enrollment is 2,500 students. The 9 through 12 high school enrollment is approximately 850. The community has a large number of industries for its size. The community is located approximately 15 miles from a major metropolitan area.

Information Gained From the Visit

Administrators:

- Approximately 40% of the senior class is enrolled in one of the cooperative programs.
- Cooperative coordinators also teach other classes in addition to related instruction class and coordinate the cooperative students.
- The coordinators service about 20 cooperative students.
- Currently reimbursement for exceptional cost of the cooperative program is not too important, however, with pending state legislation, vocational reimbursement may become more necessary.
- Some academic teachers have some concerns about the large numbers of students enrolled in cooperative programs.
- Career education is being implemented in the elementary grades. For several years the students have been required to take a course in vocational research sometime during their junior or senior high schooling.
- Some mini courses are provided during the school year which provide out-of-school exploratory experiences.
- An organized student evaluation of the cooperative program does not exist.
- The area school servicing this local school has expressed a desire in providing preparatory programs for the high school students. Local school officials are of the opinion that this is not feasible because of transportaticn problems and tuition costs.
- A local work experience program is offered for those with lesser abilities and is coordinated by the guidance counselors.
- Regional consultants have visited with the local administrators. about implementing the career education concept.

Teacher-Coordinator Comments:

Distributive Education

- Most of related instruction in distributive education is general related since specific related instructional materials are difficult to locate.
- The coordinators professional association provide related instruction materials or guides to locate the materials.
- The distributive program services students with a full range of academic abilities. Often times the lesser ability students are placed in training in retail gasoline outlets.
- Adult education classes are offered by the local school, however, are sponsored by the area school. One of the vocational coordinators in the local school recruits the staff, supervises instruction, and collects the tuition which is

- then turned over to the area school. The area school also collects general aid and pays the instructional and supervisory salaries.
- Few distributive students pursue some type of post secondary education.
- Few students would enroll in the distributive education program without pay.
- The distributive education coordinator does provide the opportunity for students to evaluate the instructional program.
- Some distributive education students work 40 hours per week plus their in-school time. This includes evening and Saturday work.

Trade and Industrial

- The only screening of students depends on their interest in a specific field of study and some aptitude testing to identify potential for success.
- Specific related instructional materials for trade and industrial occupations are difficult to locate. Therefore most related instruction is of a general nature.
- Some students are placed in large manufacturing firms in occupations which are considered hazardous, however, because they are in training the placement is legal. If the student graduates in June and will not reach 18 years of age until September he will not be able to operate the machinery during the summer.
- The coordinator visits the training stations approximately every two weeks.
- The program advisory committee consists of exclusively employers. No parents or students participate. Advisory committee members are contacted on an individual basis.

Guidance Counselors:

- There is some interest in opening enrollment in the cooperative program to juniors in high school.
- There is some concern that those students who are college bound should be enrolled in a cooperative program which may not be for as long a duration as the existing program.
- Some cooperative programs become very selective so that those who are admitted could probably succeed without the program.

Students Comments:

- Some students were of the opinion that certain prerequisite courses are desirable before enrollment in a cooperative program. To illustrate, marketing and sales instruction is desirable for distributive education and vocational agriculture in grades 9 and 10 is desirable for agriculture occupations employment experience.
- Most students would enroll in the cooperative program even if wages were not paid during the time they would normally be in school.
- Some students are aware of training agreements between the employer, school, and student and others are not.
- Some students report that the coordinators visit them at their training stations once every nine weeks.

Field Visit 3
4-18-74

FEASIBILITY OF A DIVERSIFIED OCCUPATIONS PROGRAMS IN IOWA SCHOOLS

A Council committee and staff met with Mr. Oliver Anderson, University of Northern Iowa on April 18, 1974. Mr. Anderson is involved in a reasearch project relating to the Council annual report for 1974.

Mr. Anderson was retained by the DPI to determine the feasibility of implementing Diversified Occupations programs in secondary schools in Iowa. This request was motivated by inquiries sent to the Department of Public Instruction by several small schools for such a program.

The study design included gathering opinions from other state education agencies concerning this type of program, surveying local school systems to identify their interest in this type of program, and identifying teacher competencies necessary by surveying D.O. coordinators.

Some of his preliminary findings reveal:
State Directors Survey Results State directors of vocational education were surveyed to determine where and how many programs of this type exist.

Program Characteristics Nineteen states reported these type of programs were operational. Attitudes about the type of program ranged from satisfied to displeased. One state is expending effort toward terminating such programs.

Teacher Education Needed The state directors that reported D.O. programs in existance also reported that no special training programs were provided for coordinators. To date none of the nineteen states which provide D.C. programs have evaluated the effectiveness of these programs.

D.O. Coordinator Survey Results Coordinators responsibility for D.O. programs in other states, were surveyed concerning their opinion about these types of programs and the competencies desirable for a multi field coordinator. The yield of information from this survey was very limited. The results included:

Coordinators of D.O. programs need a higher level of competency in locating specific related instructional (study) materials for their students.

Iowa School Survey Results A survey of 451 schools in Iowa reveal that 83% of the schools have 400 or less students in grades 10-12. One hundred of the 451 school superintendents returned questionnaires. Approximately one third of the 100 reported that they plan to implement a multi field cooperative program by 1978.

Termonology The implications of the term D.O. were considered and it is suggested that a more definitive title would be a Multi-Field Cooperative Education program.

Field Visit 4
April 24, 1974
School System A

Population, Economic, and School District Information

The high school is located in a community of approximately 6,500 population. The approximate total school district enrollment is near 2,000. The community is basically a trade center for the surrounding agricultural community with a limited number of manufacturing industries. The location of the community is approximately 50 miles from two major metropolitan centers, one of which is approximately 30,000 population, and the other approximately 100,000 population.

Information Gained From The Visit

- The dollars received in reimbursement for vocational cooperative programs nearly meets the exceptional cost of the program according to best estimates without reviewing the school district books.
- Some concern was expressed about the fact that the application for reimbursement forms were completed accurately by the school district, however, consistantly the State Department of Public Instruction personnel change the amounts requested for reimbursement.
- The school would probably conduct the vocational programs irregardless of the state and federal funds which are available. This situation may change in the future due to legislation which has been passed which may place the school district in financial stress situation.
- Regional consultants that visit the school administrator appear to have a knowledge of the career education concept.
- The local school system is making some movement towards the career education concept at all levels although it tends to be based on individual teacher motivation rather than an administrator-coordinator activity.
- The school is pleased with the business industry cooperation in accepting students for the cooperative program.
- The local school does conduct a followup of all of its students, however, the data is not analyzed and not necessarily used for program planning.
- Special education students are provided on the job training from the junior high school grades through the senior high school grades. During the senior year many special education students are released for full time on-the-job training.

Teacher-Coordinator Comments:

- One of the major values of the cooperative program is an improvement in the student attitude about school. It appears that the on-the-job experience provides the students with the understanding of what is required in the real work world and they then see the value for the academic instruction.
- The coordinators have a teaching load of six or seven periods a day and are provided two periods a week for coordination per each ten students. In many cases the coordinator uses his planning period for coordination of on-the-job phase of the cooperative program also.
- The coordinator usually visits the training stations once every two to three weeks.
- The vocational instructors have the opportunity to participate in the teaching of a careers course for 7th grade students.

- The community college does not provide competition for training stations for the secondary school cooperative program.
- The employers adhere to the conditions outlined in the training agreement between the school, the student, and the parent.
- In addition to the training agreement, the coordinators cooperate in the preparation of a training plan which is a separate document. The employers do follow the training guide outline.
- The rotation of students from one job assignment to the other within the employers company presents no problem with the employers in this community. This provides the students with a full range of job skills by the time they complete the cooperative program.
- The young people enrolled in the cooperative program have a high level of interest in youth organization activities. The school administration provides support for the youth organization, and the employers are willing to release students from their training situation for participation in state youth organization conferences.
- Where equipment is needed in the cooperative program it is of high quality, however, it is totally financed by the local school system.
- The philosophy and commitment of the local school system dictates the quality of the program offered by the school.
- There is enough student interest in the cooperative type program that it would be practical to establish morning and afternoon sessions in each cooperative program specialty.
- Advisory committees are used extensively by the local school system and they meet with the coordinators approximately every five weeks to discuss issues relating to the training program.
- A few large firms in the community do take cooperative students in distributive education and office education programs.
- The office education program uses general related instruction while the distributive education program is involved in the use of individualized instructional materials. These materials have been developed by the University of Northern Iowa as part of a thirteen state consortium on individualized instruction for distributive education students.

Student Comments:
- Students are aware of the training agreements and the contents therein.
- The students involved in a cooperative program work a minimum of 12 hours a week and a maximum of 22 hours a week for their cooperative program. The employer guarentees the minimum amount of hours work.
- The distributive education students receive two hours of related instruction of product knowledge, sales, advertising, and management. Most of these students would prefer one hour of related instruction.
- Approximately half of the students interviewed had a job before enrollment in a cooperative program. This job was the same as the one in which they are presently employed as part of the cooperative program.
- One-half of the students interviewed would enroll in a cooperative program if there was no pay involved for work during the school hours.
- Students held the opinion that the coordinators seldom visit them at their training stations for coordination purposes. After further questioning some admitted that the coordinator visits once a month in some cases and in other cases once a year.
- The students reported that the school system reschedules extra curricular activities to the morning periods so that all students can participate in

school extra curricular activities.

- Some cooperative students feel parental and peer pressures to continue on to college, however, others plan to continue working after graduation.
- The students must have a C average for enrollment in a cooperative program.
- The students interviewed express the opinion that high school students are not as interested in a four year college program as they may have been in the past.

Field Visit 4
April 24, 1974
School System B

Population, Enrollment, and School District Information

The school system is located in a community of approximately 550 population. The total school population is approximately 400. The community industry includes a retail service area of limited size with the major industries being in cafe, a small grocery store, a farm equipment dealer, and a bank. Its location is approximately 30 miles from a major metropolitan area with a large quantity of trade business, and also is 50 miles from two other large metropolitan areas to service the buying needs of the persons surrounding the community. The school does not have a cooperative type program. The purpose of the visit was to determine school administrator attitudes about the feasibility of implementing a cooperative program in that community.

Information Gained From The Visit

Administrators:

- All of the information gained in this report was obtained from the school superintendent during the Council team visit.
- The school does utilize a work release program for students to gain work experience. No supervision is provided for the students in this program.
- The school does have a work study program for low income families. The only vocational program provided by the local school is a home economics program. Memorandums from the State Department of Public Instruction made the local school aware of the availability of vocational work study funds. Students from low income families are placed in the work experience program, eventhough they have never been enrolled in a vocational program.
- Those students on the work release program often times travel as far as 30 miles for their work experience training. This is a noncredit opportunity for high school students.
- There are 26 students in the senior class and 34 students in the junior class.
- The local school system has worked out a program where they share teachers in subject matter areas where there is low enrollment with adjacent school districts. It is their opinion that this would be a practical approach to implementing a cooperative program in the school system.
- State and federal funds would help establish such a program but present estimates indicate this aid would not be absolutely essential for the implementation of such a program. Apparently the wealth per student in the school district was at a high level.
- The employment of a coordinator is essential for the proper operation of a cooperative program.
- The industrial arts program is structured toward exploratory experiences for the student.
- The main impediment to the development of a cooperative program is an extreme shortage of training stations for a cooperative program both within the school district visited and those adjacent school districts who might cooperate in such an endeavor.
- The school system does provide exploratory office education programs for the students.
- The majority of high school students go on to some type of post secondary educational program, but not necessarily a college degree program.

- The possibility of establishing a central vocational facility for surrounding schools on a cooperative basis among the local school districts was explored. The only limiting factor was the distance which high school students could reasonably travel to that central vocational facility. This limit should be 25 miles.
- Establishing a vocational center with the students attending for a two week block of time at the center and spending two weeks back at their home high school would be feasible.
- Half day attendance at the vocational center and half day attendance at the home high school was not considered to be a reasonable alternative.
- The possibility of a residential vocational school for high school students would not be tolerated by the parents of the high school students.
- The area schools could operate such a center for local school districts on the condition that they would assume the greatest part of the cost of the program. The local schools would consider other alternatives for funding unacceptable.
- To this point, the local superintendents have not discussed the possibility of a joint vocational center for local schools.

Field Visit 4
April 25, 1974
School System C

Population, Economic, and School District Information

The school district is located in a community with a population of approximately 8,500. The school district enrollment is slightly more than 2,500. The community has several comparatively large industries and is one of two adjacent trade centers in the section of the state. The other trade center is approximately 15 miles away and has a population of approximately 31,000 persons.

Information Gained From The Visit

Administrators:

- The secondary schools appear to be receiving less dollars now, than previously, for conducting vocational programs. This may be due to expansion of area school programs.
- More children in recent years are preparing for work after high school than has been the case previously.
- Practical courses are in great demand in the high school and present indications reveal that this trend is likely to continue. The trend is true of both boys and girls.
- Students enrolled in high schools appear to have a greater interest for the high cost vocational programs.
- Present reimbursement policies create problems for local schools in terms of providing adequate facilities and equipment for vocational instruction.
- Currently the local schools are able to adequately equip vocational or practical type programs, however, because of recently passed legislation, financial problems will become apparent due to lack of state funding for vocational programs.
- This local school uses the flexible modular scheduling.
- Vocational education should be a part of the comprehensive secondary school and should not be an appendage to a community college or a vocational technical school.
- The Governor's Youth Opportunity Program has demostrated the ability to respond rapidly to the needs of the student when financial assistance is needed.
- This local school has implemented a work experience program primarily to motivate potential dropout students to continue their schooling. Some related instruction is provided for those in the work experience program during the sophmore and junior year.
- The work study program is utilized for special education students and the dollars to support this program come from special education.
- Followup studies of graduates of vocational programs measure quantitatively the success of the vocational program. Every five years the school surveys all graduates to measure the adequacy of preparation for the real work world considering both quantitative and qualitative factors.
- Some problems have occurred with regard to the number of training stations in the community and their availability for both high school cooperative students and community college cooperative students.
- The high school offers two cooperative programs in each subject field so that training stations can be used in the morning and the afternoon.
- The school system provides some exploratory experiences for students in the junior high school with a life adjustment program.

- The career education concept is being implemented within the school system.
- One of the elementary school principals serves as chairman of the career education committee.
- The current age requirement, which is part of the wage and hour law, inhibits the junior high school age student from gaining exploratory work experience while enrolled in the junior high school. Something should be done to change the law.
- The coordinators report that they visit the training stations approximately once a month.
- Certain exploratory instruction is required for enrollment in a cooperative program. Grade point average is not considered for enrollment.
- The coordinators employment includes a one month extension to the contract, which allows them to prepare for placement of their students in the fall. This is sufficient time.
- Studies in job opportunities are offered by guidance counselors to the students during the sophmore and junior year.
- Exploratory courses need to be broadened if possible and some experimentation needs to be done through such activities as field trips and the like.
- Small firms are more interested in employing cooperative students than are the large firms.
- Advisory committees are seldom used with the cooperative program. Most contacts are made on an individual basis.
- Students are highly interested in the youth organizations which are part of the instruction in a cooperative program.

Students:
- Many students enroll in cooperative programs because of encouragement of students who were previously enrolled.
- Most students would enroll in a cooperative program if there were no pay for the hours spent in training on school time.
- Students report that coordinators visit the program once every nine weeks.
- Students report that training agreements are in effect, however, they are not aware of any training plans.
- The students do miss out on extra curricular activities but then they don't really care whether they do participate in those activities.
- All students report that they are exposed to general related instruction only and that specific "know why" is taught on the job only.
- Fifty percent of the students enrolled in a cooperative program were working in that job before they enrolled in the cooperative program.
- Approximately 100 out of the 190 seniors in the high school are enrolled in the cooperative program.
- Students were of the opinion that they should be involved in the advisory committees for the cooperative program.

Appendix

Personnel Contacted to Gather Information for 1974 Annual Report

Waterloo Community School District
Waterloo, Iowa

Administrators
- Dr. Kenneth Jensen, Director, Secondary Education
- Mr. Alan Krebs, Principal, East High School

Teacher Coordinators
- Mr. John Griffiths, Distributive Education
- Ms. Joyce Cook, Office Education
- Mr. Forrest Harbaugh, Trade and Industrial
- Mr. Robert Reuter, Governor's Youth Opportunity Program

Students (representing distributive and trade and industrial fields)
- Cara Powers
- Mike Russell
- Linda Wright
- Randy Kane
- Don Akers

Dike Community School District
Dike, Iowa

Administrators
- Mr. Emmett B. Tyler, Principal

Teacher-Coordinators
- None

Students
- None

Waverly-Shell Rock Community School District
Waverly, Iowa

Administrators
- Mr. Glenn B. Brostrom, Superintendent
- Mr. Michael Bock, Assistant High School Principal

Teacher-Coordinators and Counselors
- Mr. Michael Black, Distributive Education
- Ms. Marietta Schemmel, Office Education
- Mr. Robert Bailey, Trade and Industrial
- Mr. Dean Greenough, Counselor
- Mr. Don Moeller, Counselor

Students
- Bruce Jud, Agriculture Business
- Debra Mennenya, Distributive Education

Linda Reinhardt, Distributive Education
Gayler Dewy, Agriculture Business
Craig McEnany, Agriculture Business

Iowa Falls Community School District
Iowa Falls, Iowa

Administrators
Mr. Robert Heston, Superintendent
Mr. Robert Wiseman, Principal

Teacher-Coordinators
Mr. Ted Crawford, Distributive Education
Mrs. Janet Wender, Office Education

Students
Jeff Bean, Distributive Education
Jill Smart, Office Education
Becky Klein, Office Education
Cindy Ackerman, Office Education
Max Clark, Distributive Education
Hal Campbell, Distributive Education

Radcliffe Community School District
Radcliffe, Iowa

Administrators
Mr. Larry B. Fudge, Superintendent

Webster City Community School District
Webster City, Iowa

Administrators
Mr. Robert E. Horsfall, Superintendent
Mr. Leslie Huth, Principal

Teacher-Coordinators
Mr. John Kidney, Distributive Education
Mr. Richard Pound, Office Education
Mr. Clyde Ware, Trade and Industrial Education

Students
Barbara Anderson, Distributive Education
Jeanne Grenfe, Distributive Education
Roger Pearson, Distributive Education
Linda Bakrenfuss, Office Education
Rita Nilles, Office Education
Sandy Tweat, Office Education
Nickie Nicholson, Office Education
Sue Olson, Office Education
Curtis Turner, Trade and Industrial
Mike Wise, Trade and Industrial

Southeast Polk Community School District
Runnells, Iowa

Administrators

- Mr. Charles Varner, Superintendent
- Mr. Donald Kiester, Curriculum Director
- Mr. Robert Norris, Principal
- Mr. Merle Butts, Vocational Director

Teacher-Coordinators

- Mr. John Stefel, Distributive Education
- Ms. JoAnn Pederson, Food Service
- Ms. Jean Corcoran, Distributive Education
- Mr. Michael Horton, Trade and Industrial
- Mr. Merle Butts, Work Study and Office Education

Students

- Nancy Stahawick, Office Education
- Carol Nesheim, Office Education
- Connie Cheers, Office Education
- Susan Cowell, Office Education
- Cindy Glenn, Office Education
- Sue Dales, Distributive Education
- Dan R. Weaver, Distributive Education
- Randy Wise, Distributive Education
- Terry Evans, Distributive Education
- John Gilkison, Trade and Industrial Education
- Rick Keim, Trade and Industrial Education

West Des Moines Community School System
West Des Moines, Iowa

Administrators

- Mr. Sherwin Sankey, Principal

Teacher-Coordinators

- Mr. Roderick Kent, Distributive Education

Students

- Marlene Lockey, Distributive Education
- Dan Burnett, Distributive Education
- Debbie Schlemner, Office Education
- Cheryl Hoover, Office Education
- Mary Rice, Office Education
- Dana Olsasky, Office Education
- Dawn Ronald, Office Education
- Linda Flynn, Office Education
- Kay Fabritz, Office Education
- Janet Rippentrap, Office Education

Waukee Community School System
Waukee, Iowa

Administrators

Mr. Clair Eason, Superintendent
Mr. Vincent Meyer, Principal
Mr. Jerry Soper, Guidance Counselor

Atlantic Community School District
Atlantic, Iowa

Administrators

Mr. John Hunter, Superintendent
Mr. Darrell Eblen, Principal

Avoha Community School District
Avoca, Iowa

Administrators

Mr. Gordon Ohm, Superintendent
Mr. Vincent Archer, Principal

Harlan Communicy School District
Harlan, Iowa

Administrators

Mr. Orville P. Frazier, Superintendent
Mr. Larry Parr, Principal

Teacher-Coordinators

Mr. Harold Johnson, Trade and Industrial Education
Mr. Larye Johnson, Business Education

Students (representing Trade and Industrial, Business, and Agriculture Occupations Employment Experience)

Ronell Pelsche
Tom Powers
Randy Henrickson
Deb Kersten
Donna Gaul
Pam Schulte
Carol Leinen
Tom Blum
Mark Schwery

APPENDIX B

Paper 1

State of Iowa
Career Education Advisory Council

ANALYSIS OF POTENTIAL GROWTH OF SECONDARY COOPERATIVE PROGRAMS

Introduction

One element of the Council annual report should be devoted to an assessment of the validity of the projections contained in the State Plan. Cooperative type programs are unique, when compared to preparatory type programs. This type of instructional technique provides students with employment skills and knowledge in many closely related occupations. Following is an explanation of the procedures and techniques that were used to identify the potential for implementation of cooperative programs. The reader should be aware that the results from the analysis can be used for developing a plan for providing consulting services designed to encourage needed new program implementations.

Methodology

1. The minimum school system size for new programs was established by selecting the minimum number of 12th grade students for which cooperative programs can be justified. This number was estimated by assuming: (1) a percentage of the students in the senior class would enroll in the program; (2) computing total 12th grade enrollment based on that percentage and total school enrollment based on the 12th grade as one-twelfth of total enrollment.

Applying the above method: (1) The minimum number of 40 senior students is needed to justify a broad vocational program offering. Of this number 30 would be enrolled in a multifield cooperative program and 10 in a vocational agriculture education program; (2) it is assumed that the 40 students would comprise 25 percent of the senior class enrollment; (3) therefore a minimum senior class enrollment should be 160 students, and the school system would enroll approximately 1900 students.

An analysis of school systems enrollments reveals that of 451 districts, 83 percent enroll 1900 or less students while approximately 12 percent enroll between 1900 and 3799 and approximately 5 percent enroll 3800 or more students.

The 451 school districts (systems) in the state are classified as:

Group 1	Enrollments under 1900	377 school systems
Group 2	Enrollments 1900 - 3799	53 school systems
Group 3	Enrollments 3800 and over	21 school systems

2. Potential growth of cooperative type programs is closely related to business patterns in the surrounding area. Sufficient business must be available to place students in on-the-job type training situations.

Inasmuch as the geographic area covered by a school system frequently extends beyond the community in which it is located it is assumed that the training stations for students in the cooperative program may also extend beyond the community. In the case of larger communities the number of potential training stations provided in the larger community may be estimated. Information on countywide estimates of potential training stations in less populous sections of the state is available from the U.S. Government publications. An analysis, by county, of economic conditions, when combined with enrollment statistics, serves as predictor of potential growth of cooperative programs.

3. Using the U. S. Department of Health, Education, and Welfare Education Directory, 1973-74 Public School Systems as the source, countywide enrollments were totaled and 12th grade enrollments estimated as one-twelfth of the total for each of the 99 counties.

4. The feasibility of establishing a cooperative program depends partially on two factors which include the enrollment of the 12th grade and also the potential training stations which the community can be expected to provide. A third factor, community interest, could not be measured by this study. County Business Patterns - Iowa (U. S. Department of Commerce, Bureau of the Census),

was used to identify the potential locations for cooperative programs.

The latest data available, from the above publication,identified the number of reporting units (business or companies) by county. Smaller employers tend to have greater interest in employing students on a cooperative basis. The number of employers in each county who employ 19 or less persons were indentified. The ratio of the number of employers in this group in each county was compared to the estimated 12th grade enrollment in the county. This calculation was made for both counties in which cooperative programs are now operating (54 counties) and the 45 counties in which there are no cooperative programs.

An illustration of the estimation process follows: Buchanan County, which doesn't offer any cooperative programs, has an estimated 12th grade enrollment of 378. There are 330 companies in the county employing 20 or fewer (193 with 1 to 3 employees, 79 with 4 to 7, and 58 with 8 to 19) persons. The number of employers, 330 divided by the number of students, 378, gives an employer-student ratio of 87 percent. This is well within the range economic size of counties which have supported cooperative programs successfully in the past.

The frequency distribution of the employer-student ratios or percentages for Iowa's 99 counties is:

Employer-Student Ratio in Percent	Counties
50 - 59	2
60 - 69	2
70 - 79	8
80 - 89	23
90 - 99	26
100 - 109	15
110 - 119	11
120 - 129	6
130 - 139	4
140 - 149	
150 - 159	1
160 - 169	
170 - 179	
180 - 189	
190 - 199	1
	99

82

5. The frequency distribution of the employer-student ratios for the 54 counties in which have cooperative programs are offered.

Employer-Student Ratio in Percent	Counties
50 - 59	2
60 - 69	1
70 - 79	5
80 - 89	15
90 - 99	12
100 - 109	6
110 - 119	8
120 - 129	2
130 - 139	1
140 - 149	
150 - 159	1
160 - 169	
170 - 179	
180 - 189	
190 - 199	1
	54

Eighty-five percent of the above ratios range from 70 to 119. Many of the cooperative programs have been in existence at least since 1968-69, which is the base year for this study. This indicates that employer-student ratios in this range are sufficient to support cooperative type programs.

6. School systems selected as having the potential for new programs (or the potential for expansion of current offerings) based on the training station estimates should be examined in greater detail as candidates for programs. In addition, the methodology does not exclude automatically all school systems not satisfying this criterion. Social, economic, and geographic characteristics of communities and counties vary greatly, and other characteristics may compensate for a low employer-student ratio. For example, a coordinator may be particularly successful in placing cooperative students in his community. In addition, the frequency distribution for the counties now offering programs shows that three counties have relatively low employer-student ratios.

Group 1 - Enrollments Under 1900

The group was divided into two subgroups with enrollments of 1400 to 1899 and enrollments under 1400:

Enrollments from 1400 to 1899:

This size group is composed of 23 school systems, 10 of which are currently offering cooperative programs. The 10 systems offer 15 programs for an average of 1.5 programs each. Specialty fields and programs numbers are:

Distributive Education	4 programs	26.7% of total
Office Education	6 "	40.0 "
Trade and Ind. Education	5 "	33.3 "

Five school systems provide cooperative programs in one specialty field while the remaining five school systems offer programs in two specialty fields. Twelve of the 15 programs, or 80.0 percent, have been offered since 1968-69, the base year.

The employer-student ratios for the counties in which these school systems are located range from 78 to 195 percent with a median of 95. The communities in which these schools are located have populations between 2,500 and 10,000. Median family income for these cities as a percentage of the state median income, $9,018, ranges from 84 to 121, while that for their counties ranges from 73 to 107. (Income figures from 1970 census.)

Based on these data, these schools appear to have the potential for program expansion. For example, the five schools now offering one specialty field could be considered as potentially justifying a second field.

The 13 school systems in this group which do not have cooperative programs have county employer-student ratios ranging from 58 to 135 percent. It should be noted that four of these counties have cooperative programs in larger school systems. (Their employer-student ratios are 58, 86, 92, and 112.) Nine of the school systems are located in cities with a population of between

2,500 to 10,000 while four are smaller with populations of 527, 613, 1068, and 2,246.

Median family income in the nine cities between 2,500 and 10,000 is between $7,880 and $9,825 or 87 to 109 percent of the state median (information not available for communities of less than 2,500). County median income as a percent of state median income is between 80 and 110.

Twelfth grade enrollments in nine school systems range from approximately 120 to 160. These systems are located in cities with minimum population of 2,500. Potential for cooperative programs in their communities should be evaluated carefully. It is possible that these school systems could provide a multifield cooperative program for several years, using one coordinator, after which the student and communities interest might warrant the establishment of three specialty field cooperative programs.

The four smallest schools with enrollment between 1400 and 1900 vary geographically according to their potential to offer cooperative type programs. Carlisle Community School is located in a city of 2,246 and is also within a relatively short commuting distance of Des Moines. Maquoketa Valley Community School in Delhi (population 527) is less than 15 miles from Manchester (population 4,641) which also does not offer a cooperative program.* Contracting for cooperative coordinator services should be considered. Benton Community School at Van Horne (population 613) is located 17 miles from Vinton (population 4,845) which presently has a program, and 22 miles from Cedar Rapids. Mid-Prairie Community School at Wellman (population 1,068) is approximately 20 miles from either Iowa City or Washington, both of which have programs in operation.

Enrollments under 1400

Six school systems in this size classification are now offering cooperative programs. Total enrollments of the six range from 434 to 1,078, with 12th grade enrollments of approximately 36 to 90. The eight programs

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* It is recommended that Manchester be evaluated for a program.

(averaging 1.3 per school system) and program specialties are:

Distributive Education	3 programs	37.5% of total
Office Education	4 "	50.0 "
Trade and Ind. Education	1 "	12.5 "

Four of the eight programs date back to 1968-69, the base year, or earlier, while the other four were initiated since then, three of them at one school being offered for the first time in 1973-1974.

Kindergarten through twelfth grade enrollments of the schools in which programs have been operated continuously since 1968-69 range from 935 to 1078 with 12th grade enrollment approximately 78 to 90. Three of the schools are located in cities with populations between 2,500 and 3,500. The other three cities have populations of 1018, 1733, and 1947. Median incomes for the first three are $8,616, $8,917, and $9,046 or 96, 99 and 101 of the state median income (data not available for cities of less than 2,500). County median income as a percent of state median ranges from 67 to 97 percent with a median of 87. The employer-student ratios range from 80 to 120 percent.

State-Wide Program Availability

Presently 70 or 15.5 percent of the 451 school districts offer cooperative programs in the secondary curriculum. (On the basis of size, 97 systems have enrollments of 1400 or above, 64 or two-thirds of which offer cooperative programs. In addition, six systems under 1400 also have programs, as noted above.) Approximately one-third of the 354 school systems with enrollments less than 1400 have fewer than 500 students in grades K-12 which yields 12th grade enrollments of approximately 42 or fewer. (The 1970-71 DPI *Data on Iowa Schools, Part I, Pupils* shows that 92 school systems had 9th through 12th grade enrollments between 90 and 140, which would provide for a 12th grade enrollment of approximately 23 to 35). These few statistics serve to identify the problem in meeting the career needs of students with cooperative type programs in almost three-quarters of Iowa's school systems.

The geographic location of these smaller school systems should be examined to determine: (1) if existing or new programs in adjacent larger school systems could provide for the needs of some of these students through contract; (2) if any of the schools are sufficiently close to the six smaller schools which have programs for purposes of sharing staff in a joint effort; (3) if two or more systems could work cooperatively under a Chapter 28 E (Iowa Code) agreement to establish a multi-field cooperative programs; (4) if any of the school systems would cooperate in a countywide effort to offer specialty field cooperative programs; and (5) where cooperative programs appear to be impractical, to consider alternatives which are feasible for Iowa's smaller school systems to the end that the secondary school student who desires to enroll in career preparatory (simulation) classes while he is in high school may have the opportunity to do so regardless of the size of school he attends.

Group 2 - Enrollments 1900 to 3799

Fifty-three school systems in Iowa have enrollments in this size classification. Thirty-three or 62.3 percent offer one or more cooperative programs in 1973-74. Using 1968-69 as a base year, 26 schools provided cooperative programs in their curriculum; at present, 33 schools offer cooperative programs for an increase of 27 percent. Twenty-five of the 33 systems have offered at least one program continuously since 1968-69.

The average number of programs per school has remained at 1.9 of a possible 3. Program offerings by specialty field have shifted in the five-year period, with Distributive Education declining from 42 to 34 percent of the total programs, Office Education remaining practically unchanged at 36 percent, and Trade and Industrial Education increasing from 22 to 30 percent.

Considering the 33 school systems that offer cooperative programs twenty-three have enrollment ranging form 1900 to 2799 while ten have enrollment from 2800 to 3799.

Enrollments from 2800 to 3799:

Six of the 10 schools in this classification have programs in one or two specialty fields. Program expansion appears feasible in four of them for a total of seven new programs. Expansion by the other two is more doubtful. One school system is too distant from a larger population center for easy commuting and the program in operation may be the maximum sustainable by the community. The other has a low employer-student ratio (54). However, programs in two specialty fields have been offered for several years, one for four years and the second for at least six years and the school system shoud be studied further to identify potential program expansion.

Enrollments from 1900 to 2799:

Five of the 23 systems with enrollments between 1900 and 2799 offer all three specialty field cooperative programs at the present time; eight systems offer two specialty fields. Estimating potential expansion based on the available data, at least six of the schools and communities could support an additional specialty field. The remaining 10 systems should be evaluated individually to determine the potential for expansion beyond their one specialty field. Several, for instance, have relatively new programs with only one to three years of operating experience.

The remaining 20 Iowa school systems with enrollments between 1900 and 3799 do not offer cooperative programs of any type. Fifteen of these systems have 2700 or fewer students and the remaining five having enrollments between 2800 and 3100. The former group has twelfth grade enrollments of approximately 160 to 225. It appears that a multifield program could be operated for approximately a three-year period at which time several specialized programs should be established. The five systems with enrollments between 2800 and 3100 have the potential to offer three specialized programs. Three of these school systems are located in counties in which cooperative programs are now offered, and in which the employer-student ratio is 72 percent or higher. The fourth school system is located in a county with an employer-senior student ratio of only 58 percent. However, the county has supported a cooperative program in a school system with two senior high schools, one of which offers three specialty fields and the other, two. Some further analysis may be necessary to determine the feasibility of expanding cooperative programs to a second school system in the county.

Group 3 - Enrollments 3800 and Over

Since 1970-71, all of the 21 school systems of this size have offered some type of cooperative program. Future growth in this size school must occur through an increase in program offerings. Using 1968-69 as the base year, when compared to Fiscal Year 1974 the number of programs in these schools have expanded from 69 to 91 or 31.9 percent. Eight of the systems have multiple high school attendance centers. The 36 attendance centers offered an average of 2.1 programs in 1968-69 and 2.5 by 1973-74.

Following is a chart showing the 21 largest school systems in Iowa with program availability by specialty field in each of the 36 attendance centers.

Cooperative Programs in School Systems with 3800 or More During FY 1974 By Type of Program

Letters A B C etc. Identify Attendance Centers.
Numbers indicate the number of coordinator-programs offered at each Attendance Center.

School Systems	DE	OE	T&I
1. Ames	2	1	1
2. Bettendorf	1	1	1
3. Burlington	1		
4. Cedar Falls	2	2	1
5. Cedar Rapids			
A	1	2	2
B	1	1	1
C	1	1	1
6. Clinton		1	
7. Council Bluffs			
A	1	1	2
B	1		1
8. Davenport			
A	1	1	1
B	1	1	1
9. Des Moines			
A	1	1	
B	1	1	
C	1	1	
D	1	1	
E	1	1	
F	1	2	1
10. Dubuque			
A	1	1	
B	1	1	

School Systems	DE	OE	T&I
11. Fort Dodge	1	1	1
12. Fort Madison	1	1	1
13. Iowa City			
A		1	1
B	1	1	1
14. Marshalltown	1	1	2
15. Mason City	2		2
16. Muscatine	1		
17. Newton	1		1
18. Ottumwa	1	1	1
19. Sioux City			
A	1	1	1
B			
C			
20. Waterloo			
A	1	1	1
B	1	1	1
C	1	1	
21. West Des Moines	1	1	
	35	32	24

Total 91 programs

Avg. per attendance center 2.5

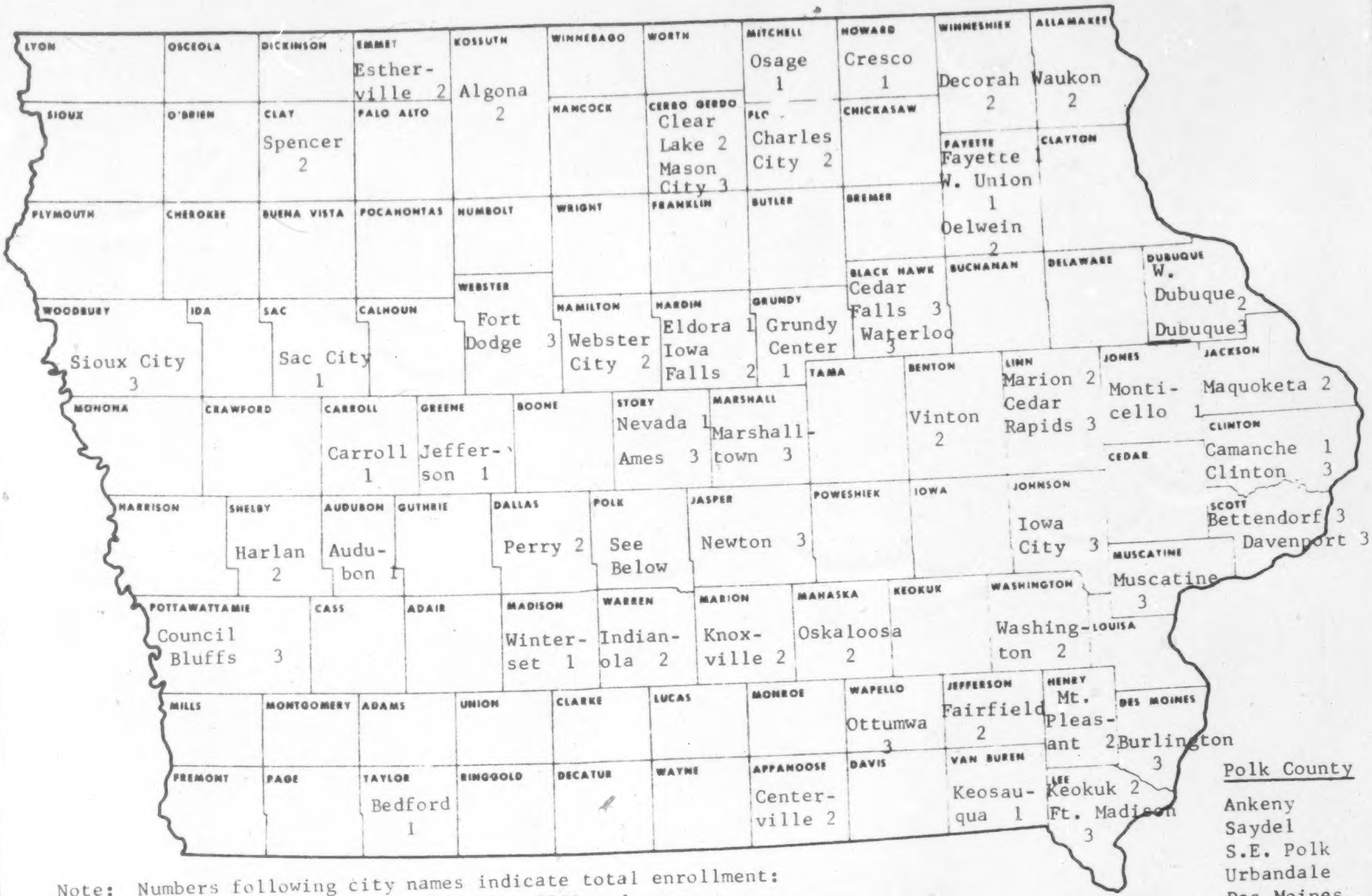
	DE	OE	T&I
Potential for Cooperative Program Expansion Based on the offering of one of each specialty program at each attendance center	4	7	14

It is apparent from the population of the communities and the attendance center enrollment in each school system that each attendance center has the potential for offering a minimum of one cooperative program in each of the three specialty vocational fields. Considering the program vacancies in the thirty-four attendance centers it appears that program expansion may occur through the implementation of four additional DE programs, seven Office Education programs, and fourteen T&I programs. The total potential program expansion in secondary attendance centers in school systems with 3800 or more students is twenty-five programs.

Tabular Assistance

The Council has developed a table which appears on pages 15, 16, and 17 for use by the Department of Public Instruction. This table identifies by name 64 school systems with K-12 enrollment of 1400 or more students. The potential for implementation of new programs by school system size, considering availability of student training stations, is totaled at the end of each school size category. This table is offered to provide assistance through an organized approach to contracting school systems for the purpose of encouraging the development of cooperative vocational programs. It is obvious that DPI consultants should work cooperatively with local school administrations in conducting further on-site evaluations of training stations potential in the county or surrounding economic area.

1973-74 COOPERATIVE PROGRAM LOCATIONS


LYON
OSCEOLA
DICKINSON
EMMET
Estherville 2
KOSSUTH
Algona 2
WINNEBAGO
WORTH
MITCHELL
Osage 1
HOWARD
Cresco 1
WINNESHIEK
Decorah 2
ALLAMAKEE
Waukon 2
SIOUX
O'BRIEN
CLAY
Spencer 2
PALO ALTO
HANCOCK
CERRO GORDO
Clear Lake 2
Mason City 3
FLO
Charles City 2
CHICKASAW
FAYETTE
Fayette 1
W. Union 1
Oelwein 2
CLAYTON
PLYMOUTH
CHEROKEE
BUENA VISTA
POCAHONTAS
HUMBOLT
WRIGHT
FRANKLIN
BUTLER
BREMER
BLACK HAWK
Cedar Falls 3
Waterloo 3
BUCHANAN
DELAWARE
DUBUQUE
W. Dubuque 2
Dubuque 3
WOODBURY
Sioux City 3
IDA
SAC
Sac City 1
CALHOUN
WEBSTER
Fort Dodge 3
HAMILTON
Webster City 2
HARDIN
Eldora 1
Iowa Falls 2
GRUNDY
Grundy Center 1
TAMA
BENTON
Vinton 2
LINN
Marion 2
Cedar Rapids 3
JONES
Monticello 1
JACKSON
Maquoketa 2
MONONA
CRAWFORD
CARROLL
Carroll 1
GREENE
Jefferson 1
BOONE
STORY
Nevada 1
Ames 3
MARSHALL
Marshalltown 3
CLINTON
Camanche 1
Clinton 3
CEDAR
HARRISON
SHELBY
Harlan 2
AUDUBON
Audubon 1
GUTHRIE
DALLAS
Perry 2
POLK
See Below
JASPER
Newton 3
POWESHIEK
IOWA
JOHNSON
Iowa City 3
SCOTT
Bettendorf 3
Davenport 3
MUSCATINE
Muscatine 3
POTTAWATTAMIE
Council Bluffs 3
CASS
ADAIR
MADISON
Winterset 1
WARREN
Indianola 2
MARION
Knoxville 2
MAHASKA
Oskaloosa 2
KEOKUK
WASHINGTON
Washington 2
LOUISA
MILLS
MONTGOMERY
ADAMS
UNION
CLARKE
LUCAS
MONROE
WAPELLO
Ottumwa 3
JEFFERSON
Fairfield 2
HENRY
Mt. Pleasant 2
DES MOINES
Burlington 3
FREMONT
PAGE
TAYLOR
Bedford 1
RINGGOLD
DECATUR
WAYNE
APPANOOSE
Centerville 2
DAVIS
VAN BUREN
Keosauqua 1
LEE
Keokuk 2
Ft. Madison 3

Note: Numbers following city names indicate total enrollment:
1. Under 1900; 2. 1900-3799; 3. 3800 and over.

Polk County

Ankeny	2
Saydel	2
S.E. Polk	2
Urbandale	2
Des Moines	3
W. Des Moines	3

Identification of School Districts Selected for New or Expanded Cooperative Programs, Fiscal Year 1975

(Based on Employer-Student Ratio and Priority Classification Criteria)

Priority Classification +	School District	City Population	Est. 12th Grade Enrollment	Employer-Student Ratio
Group 1. School District Enrollments under 1900 Students.				
Enrollments from 1400 to 1899				
School districts with existing programs - addition of second specialty field:				
	Audubon	2,907	130	110
3.	Carroll	8,716	114	195
	Hampton	4,376	122	132
	Nevada	4,952	133	93
1.	Winterset	3,686	139	78
Potential - 5 program offerings				
School districts with no programs - multifield program initially:				
	Eagle Grove	4,489	146	101
	Emmetsburg	4,150	118	90
	Forest City	3,841	131	91
2.	Glenwood	4,421	128	94
3.	Osceloa (Clarke Comm.)	3,124	125	97
	Pella	6,784	132	92
	Red Oak	6,210	150	135
2.	Shenandoah	5,968	134	134
	Sheldon	4,535	131	119
Potential - 9 programs				
Group 2 - School District Enrollments from 1900 through 3799				
Enrollments from 2800 through 3799				
School districts with existing programs - additional offerings to attain three specialty fields:				
2.	Ankeny(2)	9,151	299	94
	Charles City(1)	9,268	270	88
3.	Fairfield(2)	8,715	259	105

+ 1. High rate of youth unemployment (estimated youth unemployment rate in excess of 12%. Iowa Employment Security Commission)
2. Dropout rates greater than State averages (Department of Public Instruction, 1972-73 study.)
3. Both high rates of youth unemployment and dropout.

Group 2 - (cont.)

	Marion (Linn-Mar)	18,028	245	74
	Further evaluation:			
1.	Indianola(1)	8,976	244	58

Potential - 8 program offerings

School districts with no programs - evaluated for three specialty fields:

1.	Boone	12,468	244	93
	Cedar Rapids (College Comm)	110,642	233	74
3.	Council Bluffs (Lewis Central)	60,348	237	58*
	Eldridge (North Scott)	1,535	234	72
2.	Marion (Marion Ind.)	18,028	253	74

* Pottawattamie Co. - existing program at Council Bluffs

Potential - 5 programs with 15 program offerings

Enrollments from 1900 through 2799

School districts with existing programs in two specialty fields - addition of third specialty field:

			(1)	(2)
1.	Algona	6,032	165	119
1.	Decorah	7,458	170	121
	Harlan	5,049	198	99
	Humboldt	4,665	161	87
	Iowa Falls	6,454	165	105
	Spencer	10,278	215	115
	Further evaluation:			
3.	Oelwein	7,735	208	83*
	Waverly	7,205	211	64

* Fayette County - existing programs in three locations.

Potential - 8 program offerings

School districts with existing programs in one specialty field offered for minimum of five years - addition of second specialty field:

3.	Centerville	6,531	181	99
	Cherokee	7,272	158	88
1.	Maquoketa	5,677	177	86
1.	Vinton	4,845	159	86
	Washington	6,317	186	112

Potential - 5 program offerings

School districts with no programs - multifield program initially:

1.	Albia	4,151	163	99
1.	Anamosa	4,389	157	89

	Atlantic	7,306	203	104
	Chariton	5,009	164	102
	Creston	8,234	185	118
	Denison	6,213	168	88
	DeWitt (Central Clinton Community)	3,647	175	80
2.	Grinnell	8,402	213	101
3.	Independence	5,910	192	87
1.	LeMars	8,159	222	98
1.	New Hampton	3,621	178	96
	Tama (South Tama Co.)	3,000	205	91
	Further evaluation:			
2.	Bloomfield	2,718	163	99
1.	Manchester (West Delaware)	4,641	214	71
2.	Pleasant Valley	(NA)	203	72*

* Scott County - existing programs at Davenport and Bettendorf

Potential - 15 programs

Group 3 - School District Enrollments 3800 and over

All school districts have minimum of one specialty field - additional programs to attain three specialty fields in all attendance centers:

2.	Burlington(2)	32,366	634	98
2.	Clinton(2)	34,719	619	80
3.	Council Bluffs	60,348	1,236	58
2.	Des Moines(5)	201,404	3,604	94
2.	Dubuque(2)	62,309	1,087	99
	Iowa City(1)	46,850	790	100
2.	Mason City(1)	31,839	595	119
2.	Muscatine(2)	22,405	554	82
3.	Newton(1)	15,619	422	76
2.	Sioux City(6)	85,925	1,511	100
3.	Waterloo(1)	75,533	1,582	83
	West Des Moines (1)	16,441	530	94

Potential - 25 program offerings

Total potential growth - 90 program offerings, including districts for further evaluation.

School districts by priority classification:

No. 1 - High rate of youth umemployment	12
No. 2 - High rate of school dropouts	14
No. 3 - Both high rates of youth unemployment and school dropouts	10
Total	36
Percentage of total school districts, 64	56%

Paper 2

Iowa
a place to grow

STATE OF IOWA

Career Education Advisory Council

Executive Hills • 1209 East Court • Des Moines, Iowa 50319 • 515/281-3722

Joe White
Chairman

Harlan E. Giese
Executive Director

MEMORANDUM

Date: August 26, 1974
To: Council Members
From: Harlan E. Giese, Executive Director
Subject: Supplimentary information concerning local school finance relating to funding of vocational programs.

Introduction

During the course of Council field visits to gather information for the 1974 Council annual report numerous local school administrators, when questioned about the adequacy of funding of vocational programs, expressed the opinion that currently they are receiving sufficient federal and state funds to support cooperative type vocational programs. They further predict that in future years financial support of vocational programs will require a higher level of support than is currently provided.

General Budget Financial Support for Schools

The following information on local school finance as it affects vocational program funding is provided for your consideration.

State legislation has been passed which provides for "controlled budgets" for local schools. A "controlled budget" is a state imposed ceiling on the amount of dollars a local school may collect in state aid and from local property taxes. The "controlled budget" is based on the state average school district cost per pupil during FY '73. The state average cost per pupil during that year was approximately $1,000.

Each school system is allowed a foundation level of support. During FY '74 this was $737.00 per student. The foundation level of support is obtained from state general aid and a 20 mil local tax levy. If the 20 mil levy yields $200.00 per pupil then the school district would receive $537.00 in state general aid.

School systems with pupil costs, in FY '73, greater than the foundation average then must levy additional local millage to collect the difference between the foundation aid and allowable per pupil cost based on their FY '73 budget.

The foundation aid and maximum cost are adjusted annually by a legislative formula to compensate for trends in the State's economy, inflation, and the enrollment in the school district.

You should be aware that 325 of Iowa's 451 school districts are experiencing a decline in enrollment while only 126 are remaining static or are increasing in enrollment.

Income in addition to the "controlled" budget may be received by local schools. This is identified as "miscellaneous income". One type of miscellaneous income is state and federal vocational aid.

Vocational Program Support

The current financial support for local school vocational programs is based upon reimbursement of teachers salary and travel expense. The state reimburses new programs in local schools on a diminishing percentage concept. The first year the reimbursement is 80%, the second 60%, the third 40%, and the fourth and succeeding years the average reimbursement percentage for on-going programs. This on-going reimbursement has ranged between twenty and thirty percent. It is reported that the concept for this reimbursement system is intended to encourage the local school boards to implement new vocational programs and then later cause them to provide the majority support for the vocational program since vocational programs should be part of their curriculum.

Analysis

Local school superintendents in 325 school districts in Iowa are being forced to reduce their general fund budgets due to declining enrollments. They initially have difficulty setting aside the necessary funds to match the federal or state vocational dollars provided to assist in defraying the cost of instructors salaries and travel. In succeeding years it appears many may find it impossible to allocate additional amounts of local or State general aid funds to assume an increasing portion of the cost of salary and travel expenses for the vocational programs.

A review of expenditures of federal funds received by the state for Part G Cooperative Programs reveals that federal allotments to the state for a period of four fiscal years from 1970 through 1973 has been nearly static. The amount of federal funds available (the amount carried over plus the current allotment) increased markedly in FY '73. The expenditure of federal funds from the state to the local school districts has been nearly static.

Program growth as measured by a percentage of districts offering programs compared to the numbers of districts in the state has increased from approximately 14% in FY 1970 to approximately 15.5% in FY 1974.

Conclusion

1. The current reimbursement system for Part G Cooperative Programs has not provided an incentive to a significant number of local school boards to expand their curricular offering through the addition of a cooperative vocational program.
2. The "controlled budget" concept enacted by the State Legislature inhibits local school boards from implementing new educational programs unless additional resources are made available under the miscellaneous income category.
3. Limiting vocational reimbursement to instructor salary and travel expense does not reflect total program cost in new or continuing programs.
4. Reimbursement of new cooperative vocational programs from Part G of PL 90-576 at 80 and 60 percent may be in violation of Section 258.5, Code of Iowa.

Recommendations:

1. The State Board should seek amendment of Section 258.5 of the Iowa Code to allow reimbursement of more than teachers salary and travel expense and to

allow more than 50 percent reimbursement for program cost.

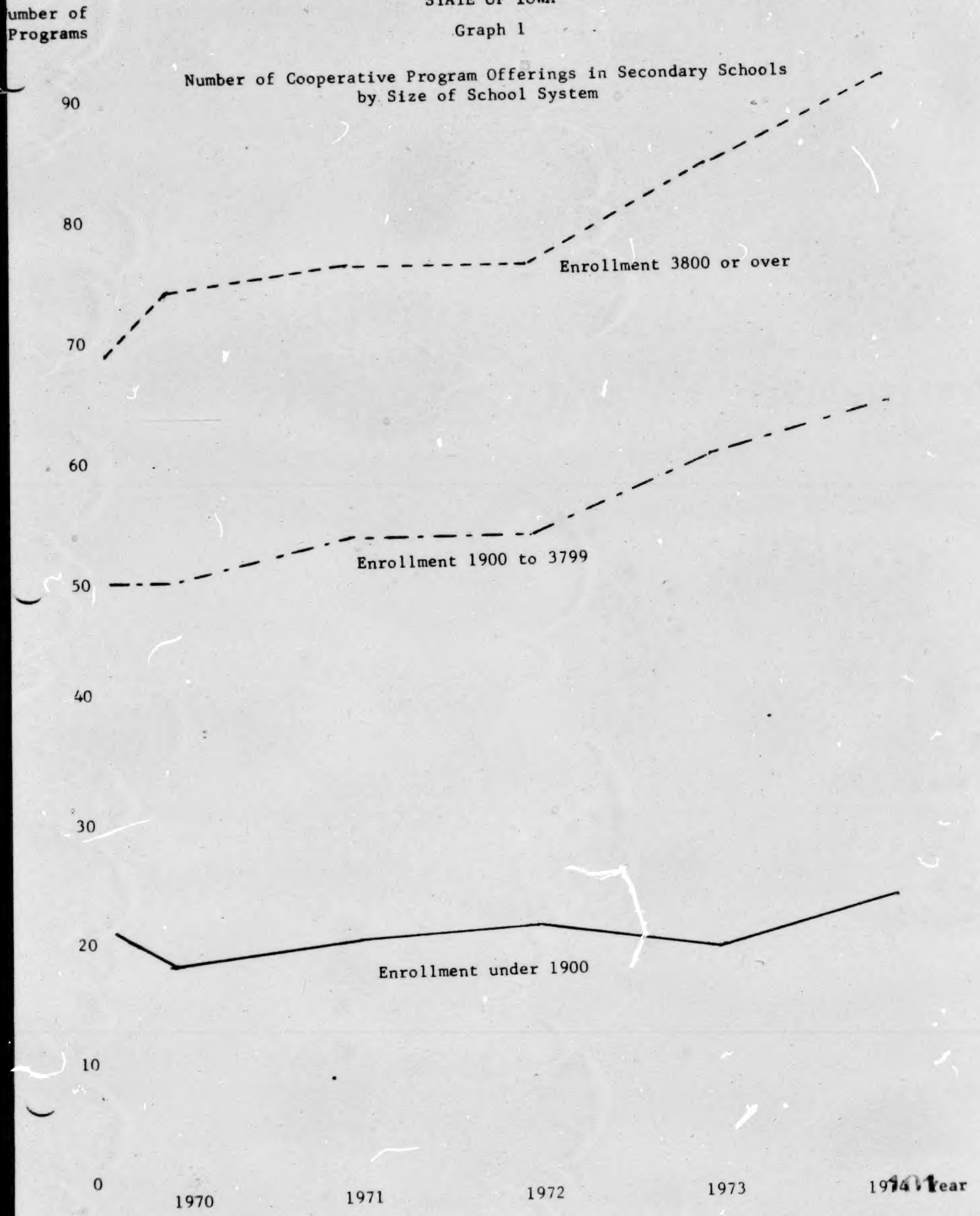
2. The State Board of Public Instruction should enact a new reimbursement policy for secondary vocational programs that is based on a "continuing support" concept.
3. Plans should be developed to request funds from the legislature to provide for "continuing support" of secondary vocational programs and to request authority to provide reimbursement for the exceptional program cost beyond the "controlled budget". (If this recommendation be accepted by the Council you should know that additional federal or State funds will be needed in the future to provide continuing support for the newly established secondary vocational programs.

APPENDIX C

STATE OF IOWA

Graph 1

Number of Cooperative Program Offerings in Secondary Schools by Size of School System

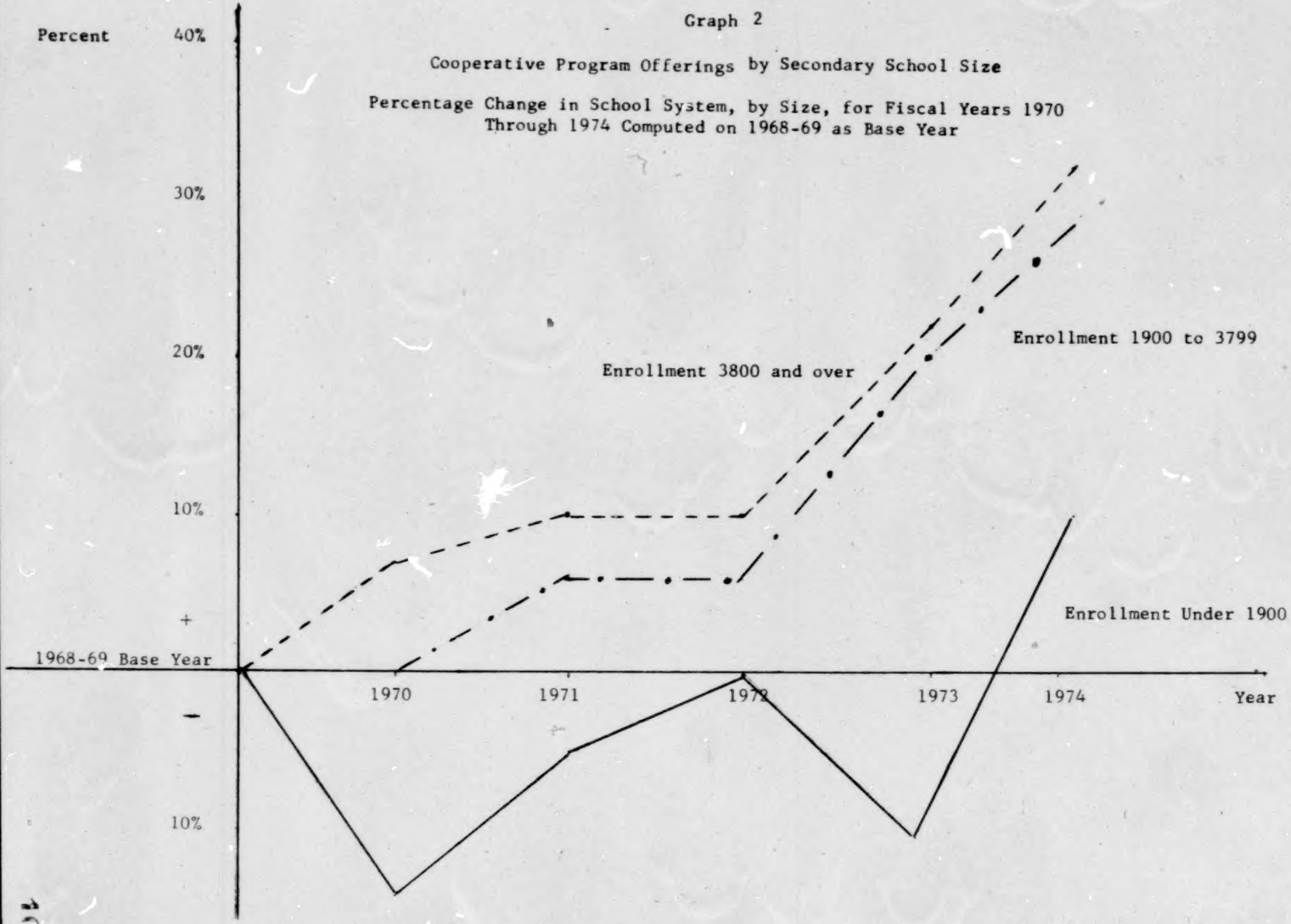


State of Iowa

Graph 2

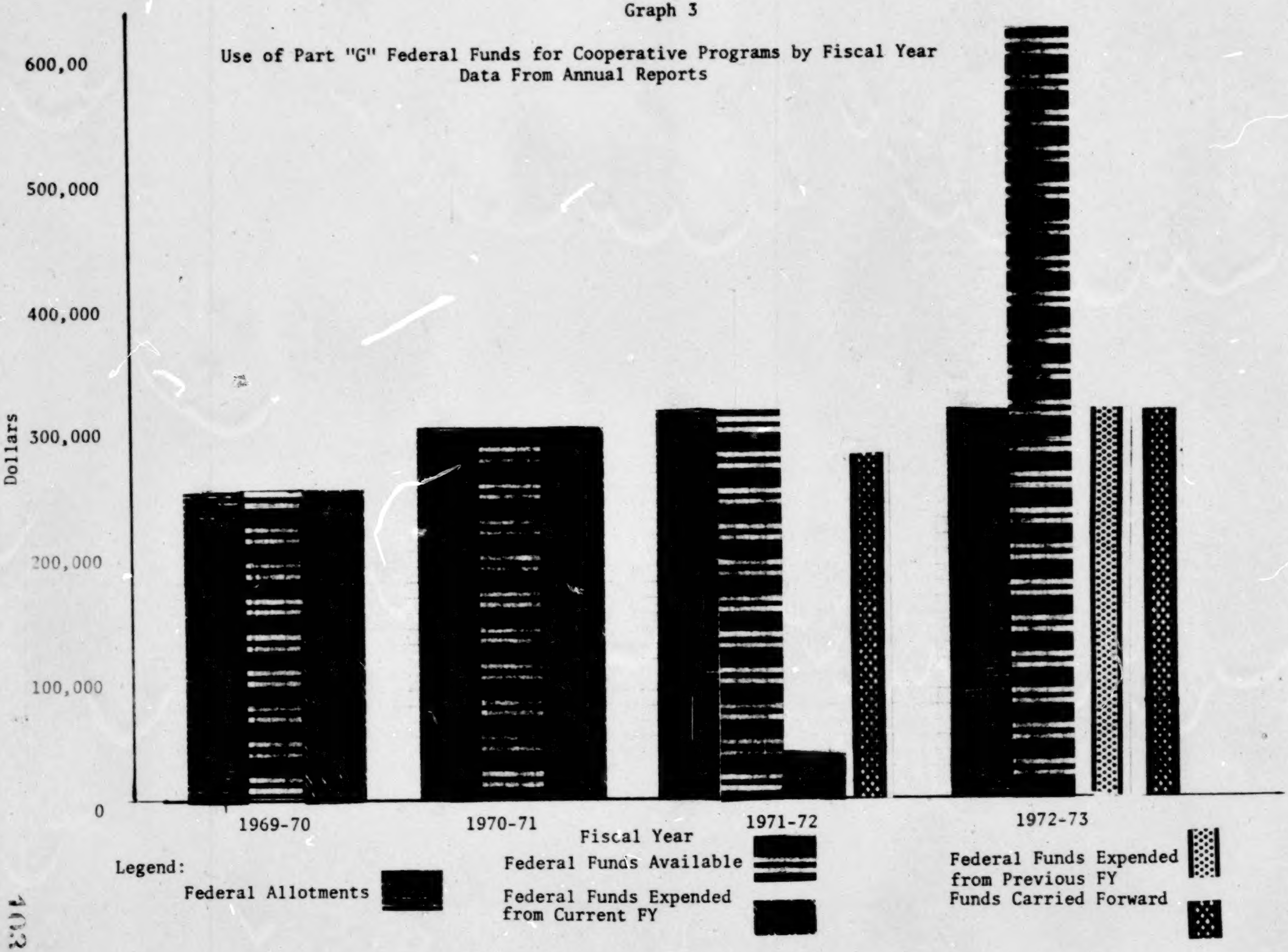
Cooperative Program Offerings by Secondary School Size

Percentage Change in School System, by Size, for Fiscal Years 1970
Through 1974 Computed on 1968-69 as Base Year



Graph 3

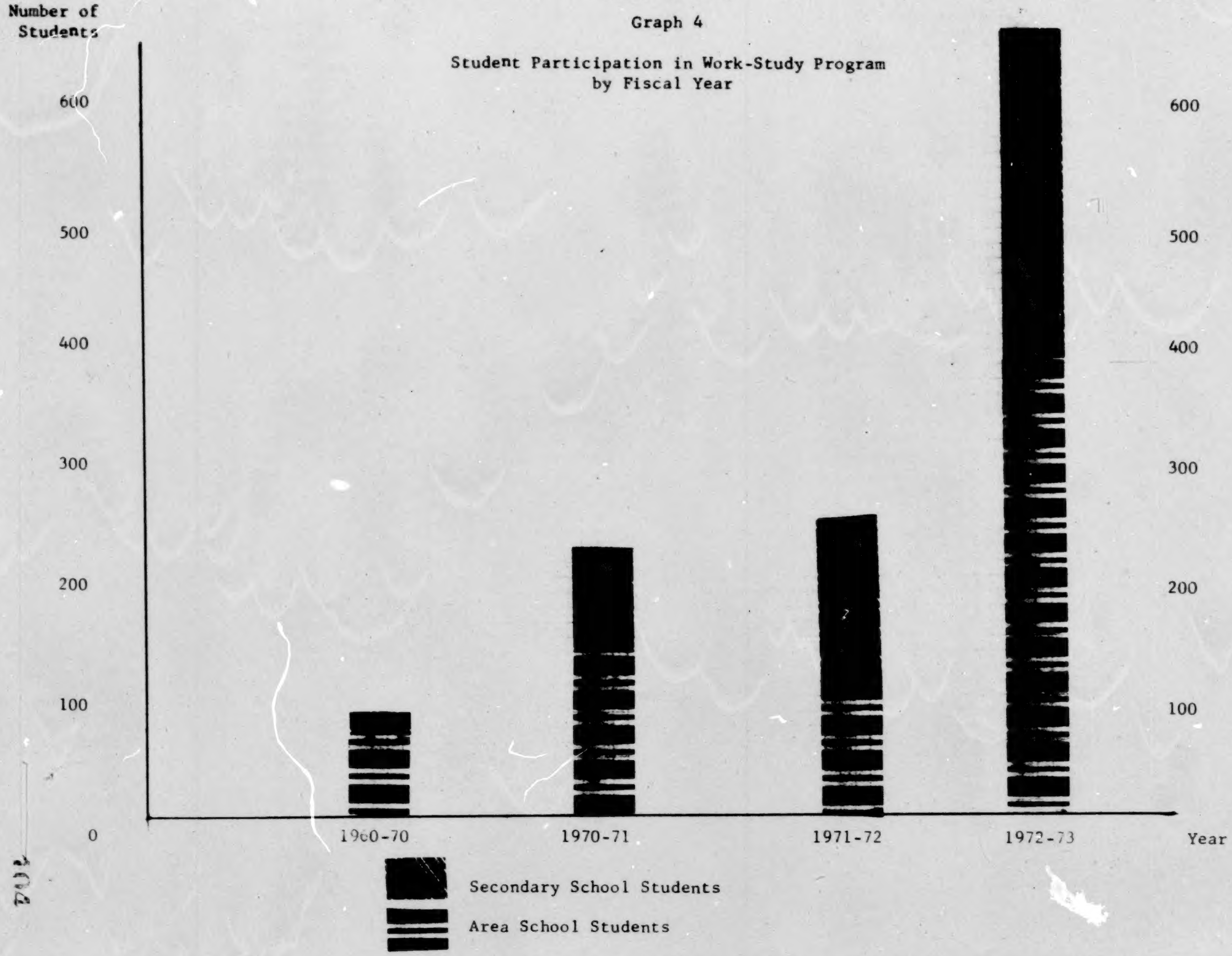
Use of Part "G" Federal Funds for Cooperative Programs by Fiscal Year
Data From Annual Reports



State of Iowa

Graph 4

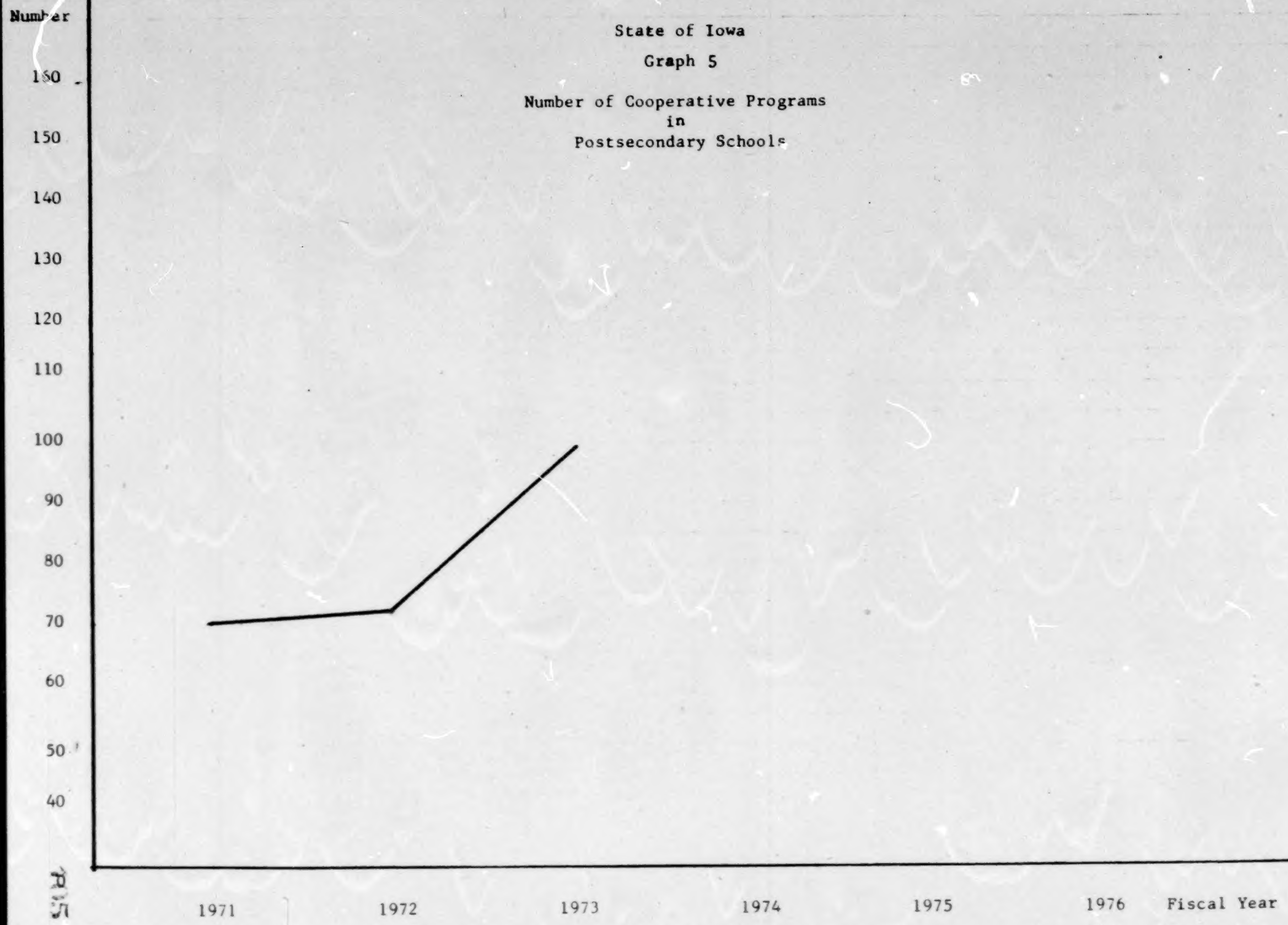
Student Participation in Work-Study Program
by Fiscal Year



State of Iowa

Graph 5

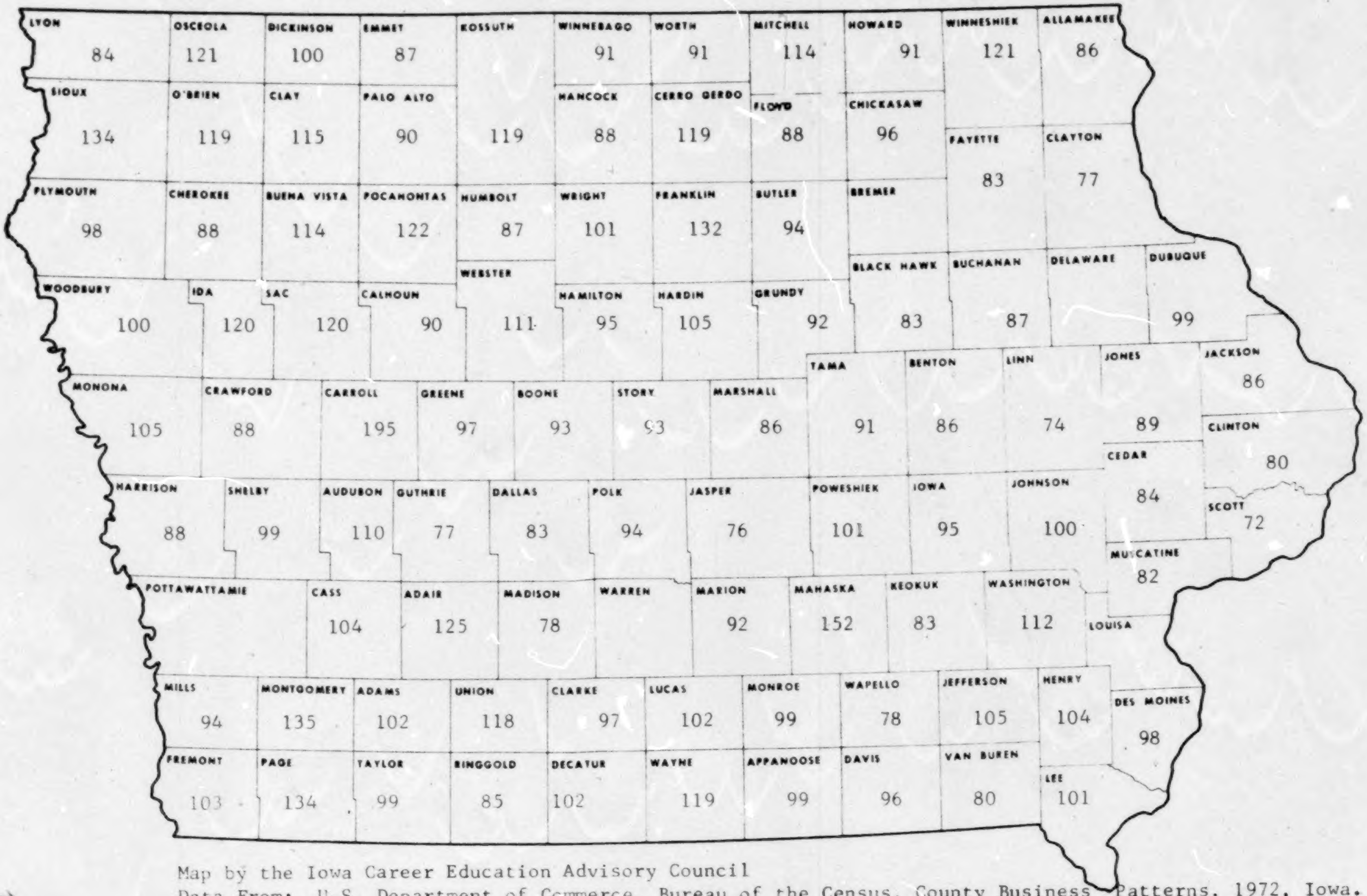
Number of Cooperative Programs
in
Postsecondary Schools



APPENDIX D

Map 1

Training Station Potential Based on County Employer-Student Ratios* of 72 Percent and Above


LYON 84
OSCEOLA 121
DICKINSON 100
EMMET 87
KOSSUTH 119
WINNEBAGO 91
WORTH 91
MITCHELL 114
HOWARD 91
WINNESHIEK 121
ALLAMAKEE 86
SIOUX 134
O'BRIEN 119
CLAY 115
PALO ALTO 90
HANCOCK 88
CERRO GORDO 119
FLOYD 88
CHICKASAW 96
FAYETTE 83
CLAYTON 77
PLYMOUTH 98
CHEROKEE 88
BUENA VISTA 114
POCAHONTAS 122
HUMBOLT 87
WRIGHT 101
FRANKLIN 132
BUTLER 94
BREMER
BLACK HAWK 83
BUCHANAN 87
DELAWARE
DUBUQUE 99
WOODBURY 100
IDA 120
SAC 120
CALHOUN 90
WEBSTER 111
HAMILTON 95
HARDIN 105
GRUNDY 92
TAMA 91
BENTON 86
LINN 74
JONES 89
JACKSON 86
MONONA 105
CRAWFORD 88
CARROLL 195
GREENE 97
BOONE 93
STORY 93
MARSHALL 86
CLINTON 80
CEDAR 84
SCOTT 72
HARRISON 88
SHELBY 99
AUDUBON 110
GUTHRIE 77
DALLAS 83
POLK 94
JASPER 76
POWESHIEK 101
IOWA 95
JOHNSON 100
MUSCATINE 82
POTTAWATTAMIE
CASS 104
ADAIR 125
MADISON 78
WARREN
MARION 92
MAHASKA 152
KEOKUK 83
WASHINGTON 112
LOUISA
MILLS 94
MONTGOMERY 135
ADAMS 102
UNION 118
CLARKE 97
LUCAS 102
MONROE 99
WAPELLO 78
JEFFERSON 105
HENRY 104
DES MOINES 98
FREMONT 103
PAGE 134
TAYLOR 99
RINGGOLD 85
DECATUR 102
WAYNE 119
APPANOOSE 99
DAVIS 96
VAN BUREN 80
LEE 101

Map by the Iowa Career Education Advisory Council
Data From: U.S. Department of Commerce, Bureau of the Census, County Business Patterns, 1972, Iowa.

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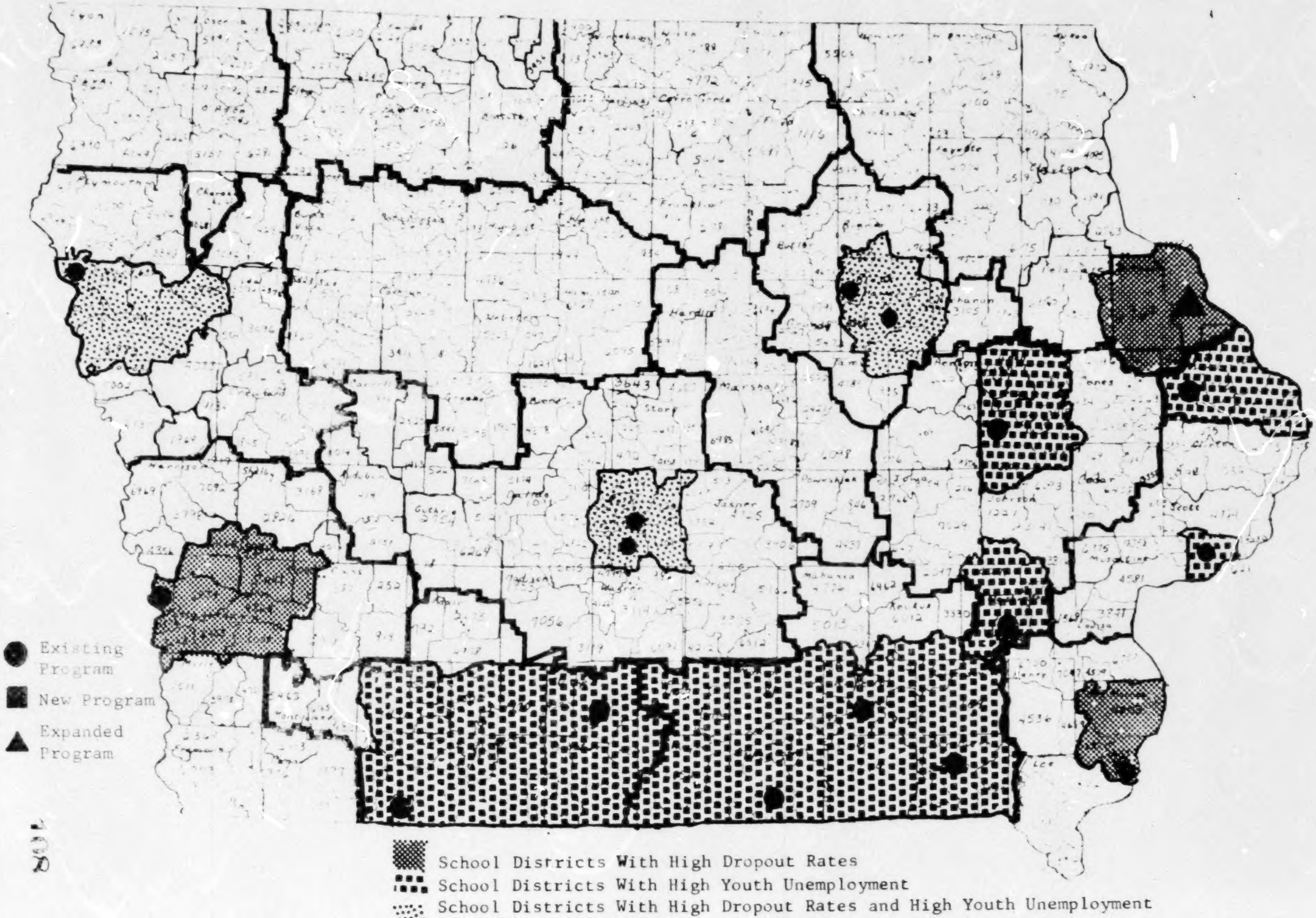
* Total number of employers in county employing 19 or fewer employees divided by estimated number of 12th grade students in county.

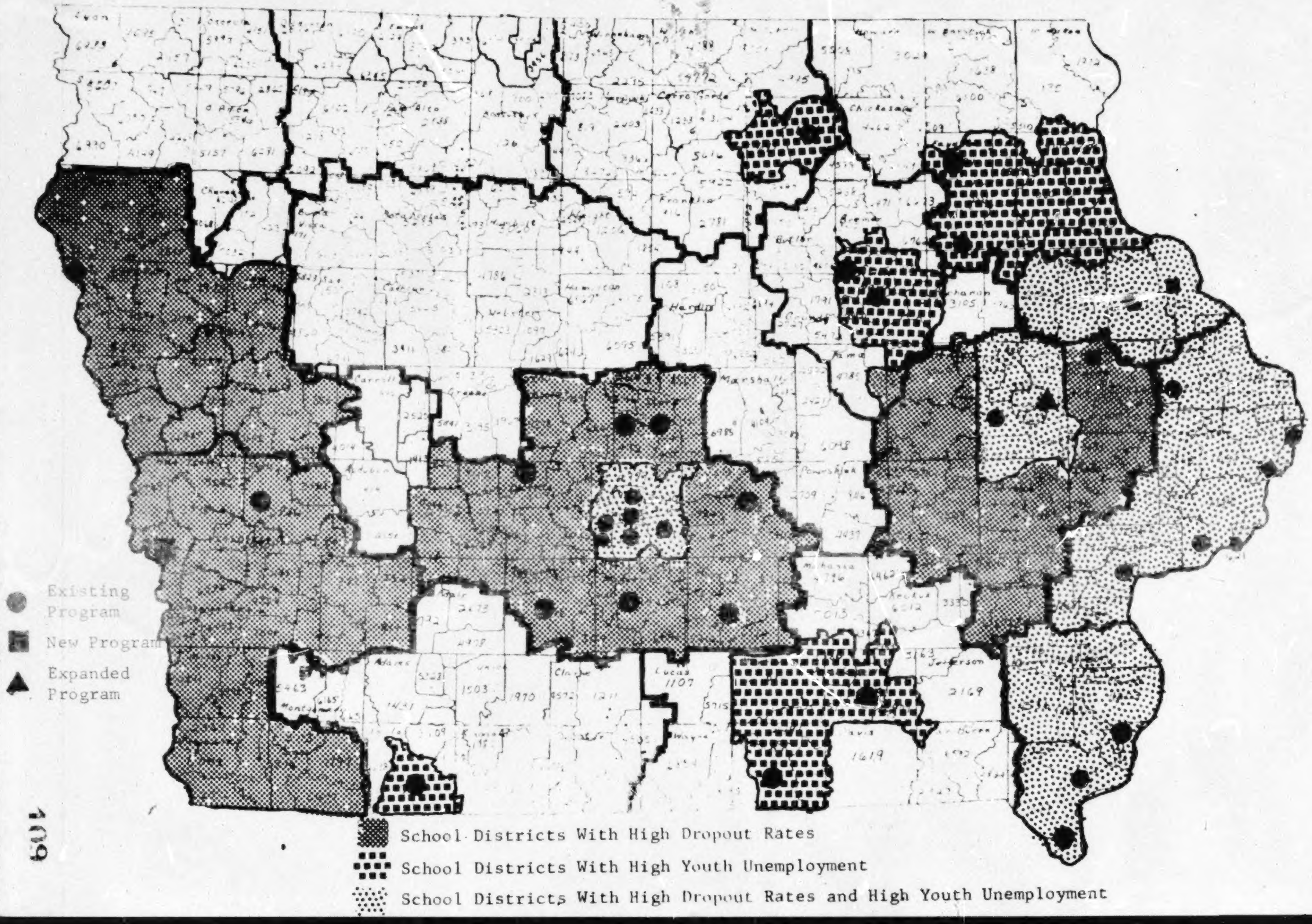
Map 2
Locations of Cooperative Programs in "High Priority" School Districts
Fiscal Year 1971


● Existing Program
■ New Program
▲ Expanded Program
▩ School Districts With High Dropout Rates
▦ School Districts With High Youth Unemployment
▨ School Districts With High Dropout Rates and High Youth Unemployment
Story
Jasper
Marshall
Hardin
Butler
Fayette
Jones
Cedar
Scott
Clinton
Muscatine
Johnson
Iowa
Keokuk
Mahaska
Lee
Plymouth
Harrison
Shelby
Guthrie
Adair
Audubon
Calhoun
Webster
Franklin
Cerro Gordo
Sac
Buena Vista
Story
Boone
Greene
Lyon
Osceola

Map 3

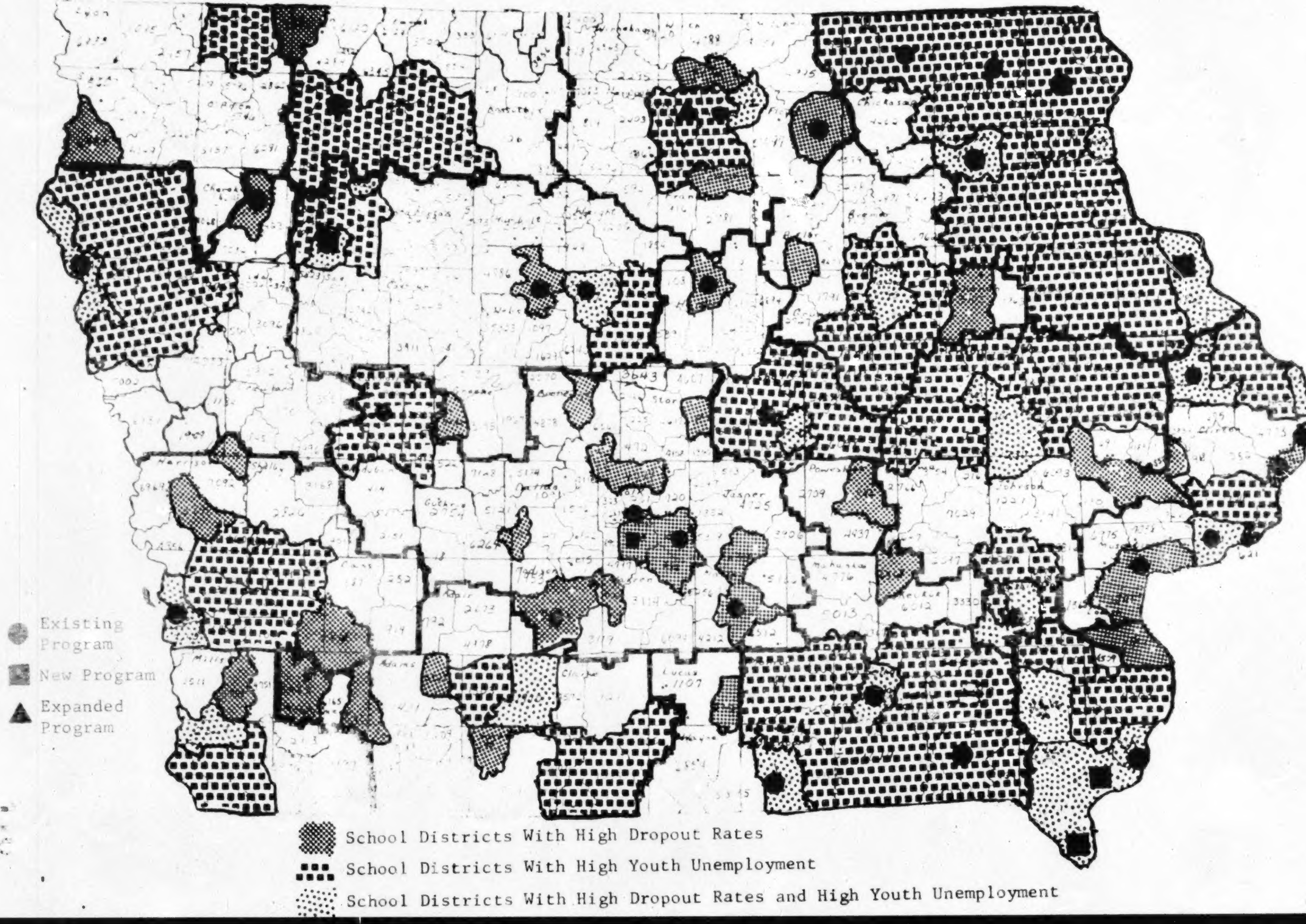
Locations of Cooperative Programs in "High Priority" School Districts

Fiscal Year 1972

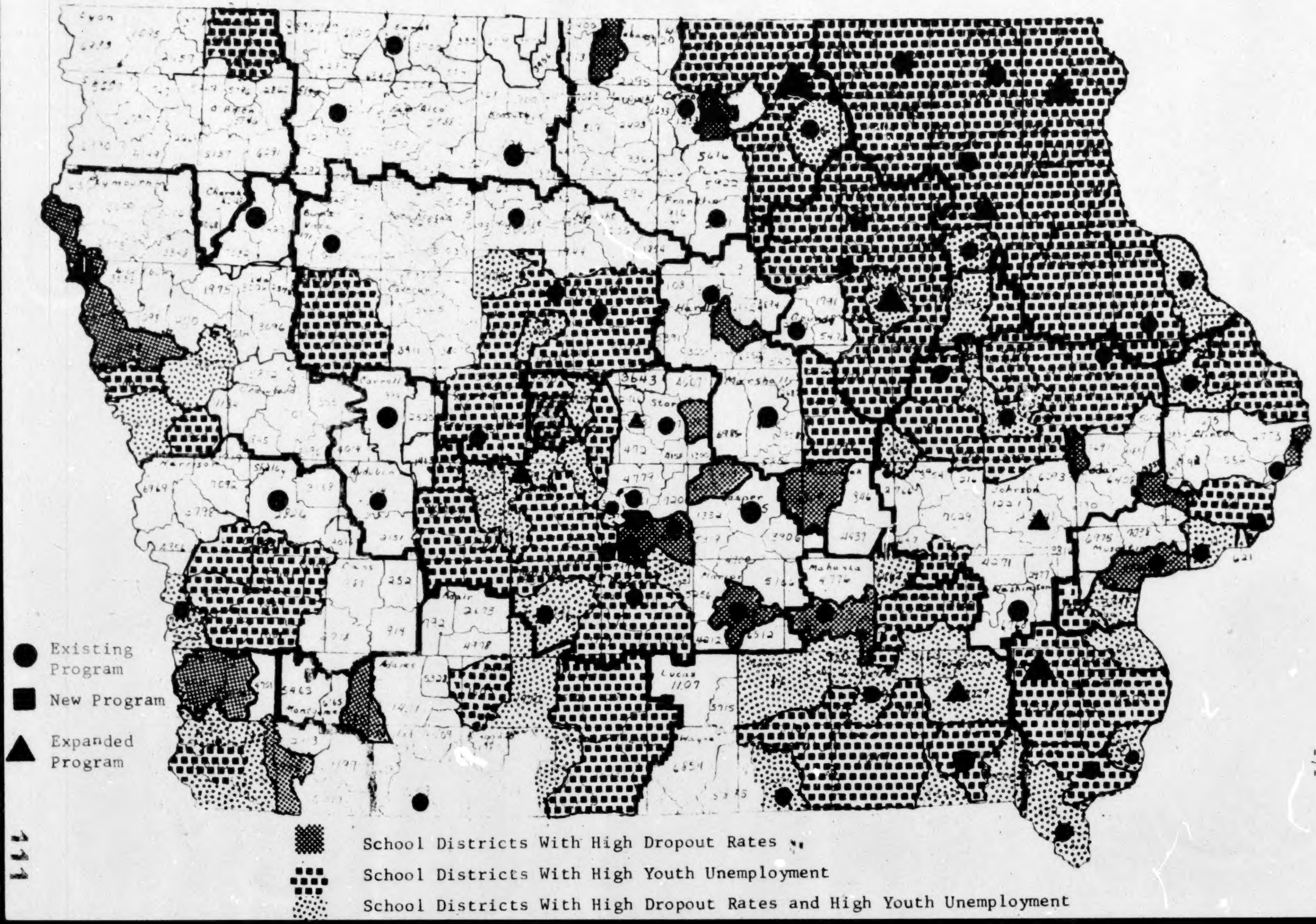

● Existing Program
■ New Program
▲ Expanded Program
▩ School Districts With High Dropout Rates
▦ School Districts With High Youth Unemployment
░ School Districts With High Dropout Rates and High Youth Unemployment

Map 4
Locations of Cooperative Programs in "High Priority" School Districts

Fiscal Year 1973


● Existing Program
■ New Program
▲ Expanded Program
▨ School Districts With High Dropout Rates
■ School Districts With High Youth Unemployment
░ School Districts With High Dropout Rates and High Youth Unemployment

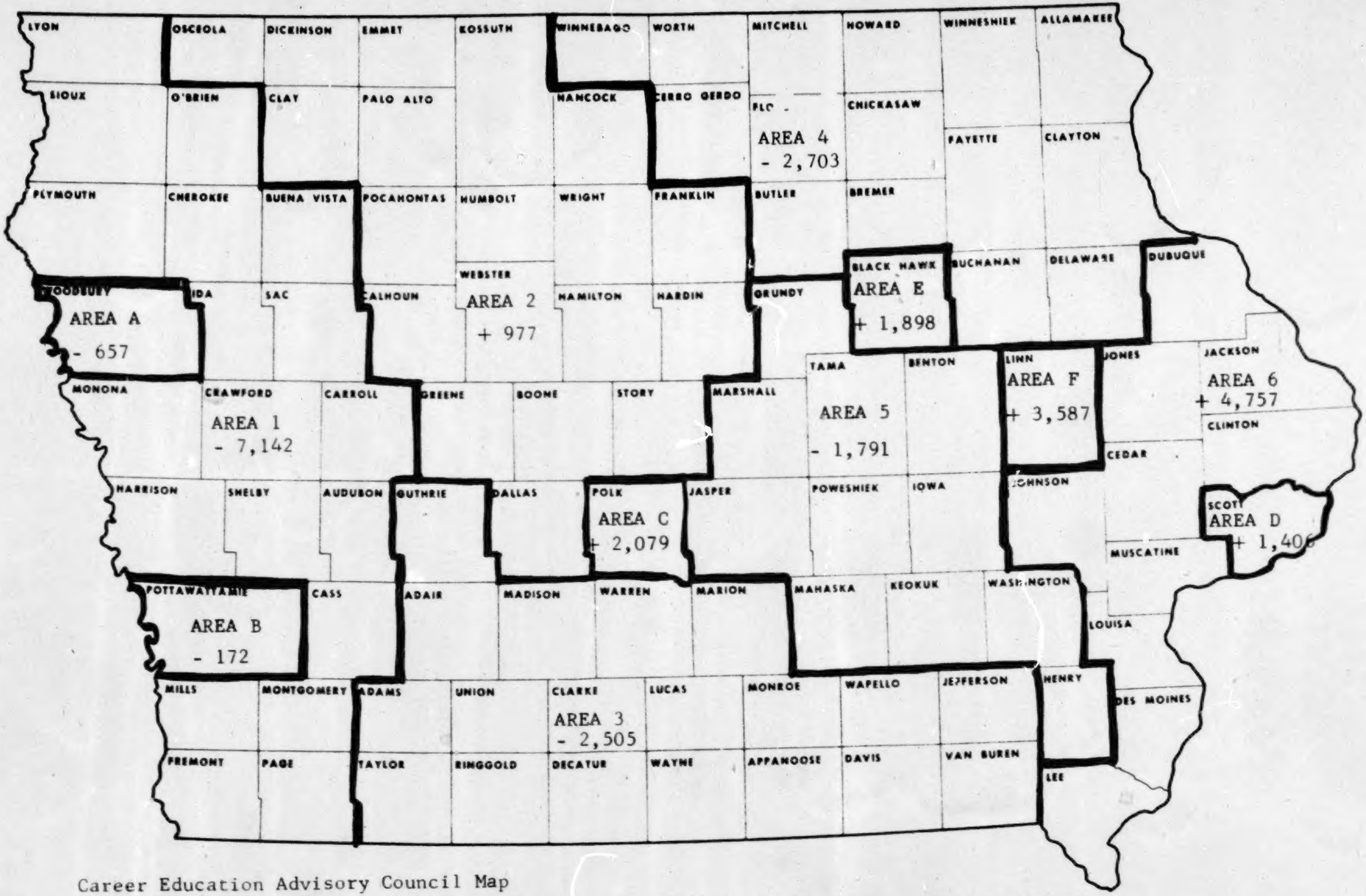
Map 5
Locations of Cooperative Programs in "High Priority" School Districts
Fiscal Year 1974


● Existing Program
■ New Program
▲ Expanded Program
School Districts With High Dropout Rates
School Districts With High Youth Unemployment
School Districts With High Dropout Rates and High Youth Unemployment

Map 6

Iowa Inter-area Migration - 1965 to 1970

(Plus or minus indicates net population gain or loss through migration)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O'BRIEN
CLAY
PALO ALTO
HANCOCK
CERRO GORDO
FLC -
CHICKASAW
FAYETTE
CLAYTON
AREA 4
- 2,703
PLYMOUTH
CHEROKEE
BUENA VISTA
POCAHONTAS
HUMBOLT
WRIGHT
FRANKLIN
BUTLER
BREMER
WEBSTER
WOODBURY
IDA
SAC
CALHOUN
AREA 2
+ 977
HAMILTON
HARDIN
GRUNDY
BLACK HAWK
AREA E
+ 1,898
BUCHANAN
DELAWARE
DUBUQUE
AREA A
- 657
MONONA
CRAWFORD
CARROLL
GREENE
BOONE
STORY
MARSHALL
TAMA
BENTON
LINN
AREA F
+ 3,587
JONES
JACKSON
AREA 6
+ 4,757
CLINTON
AREA 1
- 7,142
AREA 5
- 1,791
CEDAR
HARRISON
SHELBY
AUDUBON
GUTHRIE
DALLAS
POLK
AREA C
+ 2,079
JASPER
POWESHIEK
IOWA
JOHNSON
SCOTT
AREA D
+ 1,40
MUSCATINE
POTTAWATTAMIE
CASS
ADAIR
MADISON
WARREN
MARION
MAHASKA
KEOKUK
WASHINGTON
LOUISA
AREA B
- 172
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MONTGOMERY
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HENRY
DES MOINES
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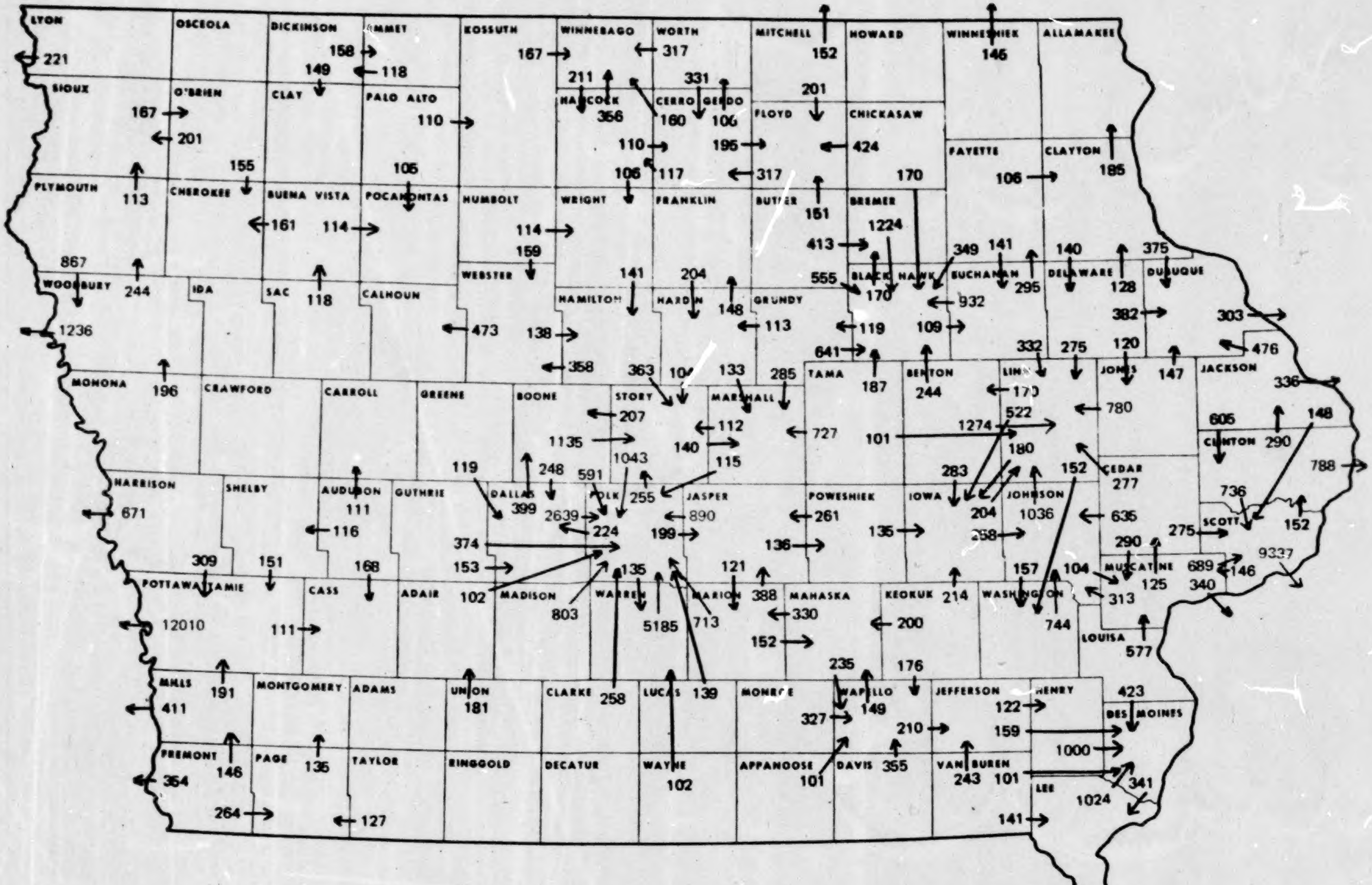
- 2,505
FREMONT
PAGE
TAYLOR
RINGGOLD
DECATUR
WAYNE
APPANOOSE
DAVIS
VAN BUREN
LEE

Career Education Advisory Council Map

Source: U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population, Migration Between State Economic Areas

Map 7

Inter-County Commuting*
1970 Census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O'BRIEN
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BREMER
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MUSCATINE
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ADAIR
MADISON
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MARION
MAHASKA
KEOKUK
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LOUISA
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DES MOINES
FREMONT
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TAYLOR
RINGGOLD
DECATUR
WAYNE
APPANOOSE
DAVIS
VAN BUREN
LEE
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149
167
317
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331
152
146
167
201
356
160
106
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424
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159
349
141
140
375
867
244
118
141
204
148
555
170
932
295
128
382
303
1236
473
138
113
119
109
476
358
641
332
275
120
147
363
104
133
285
187
244
170
336
196
207
780
605
290
148
1135
112
727
101
1274
522
1043
140
788
119
248
591
115
180
152
671
399
255
283
277
2639
890
261
204
1036
736
111
224
199
135
136
635
152
374
258
275
116
290
309
151
168
153
135
121
157
104
689
9337
102
388
214
125
146
803
330
313
340
12010
5185
713
744
111
200
152
577
235
176
191
258
139
423
411
181
327
149
210
122
159
1000
146
136
101
355
243
101
341
354
102
1024
264
127
141

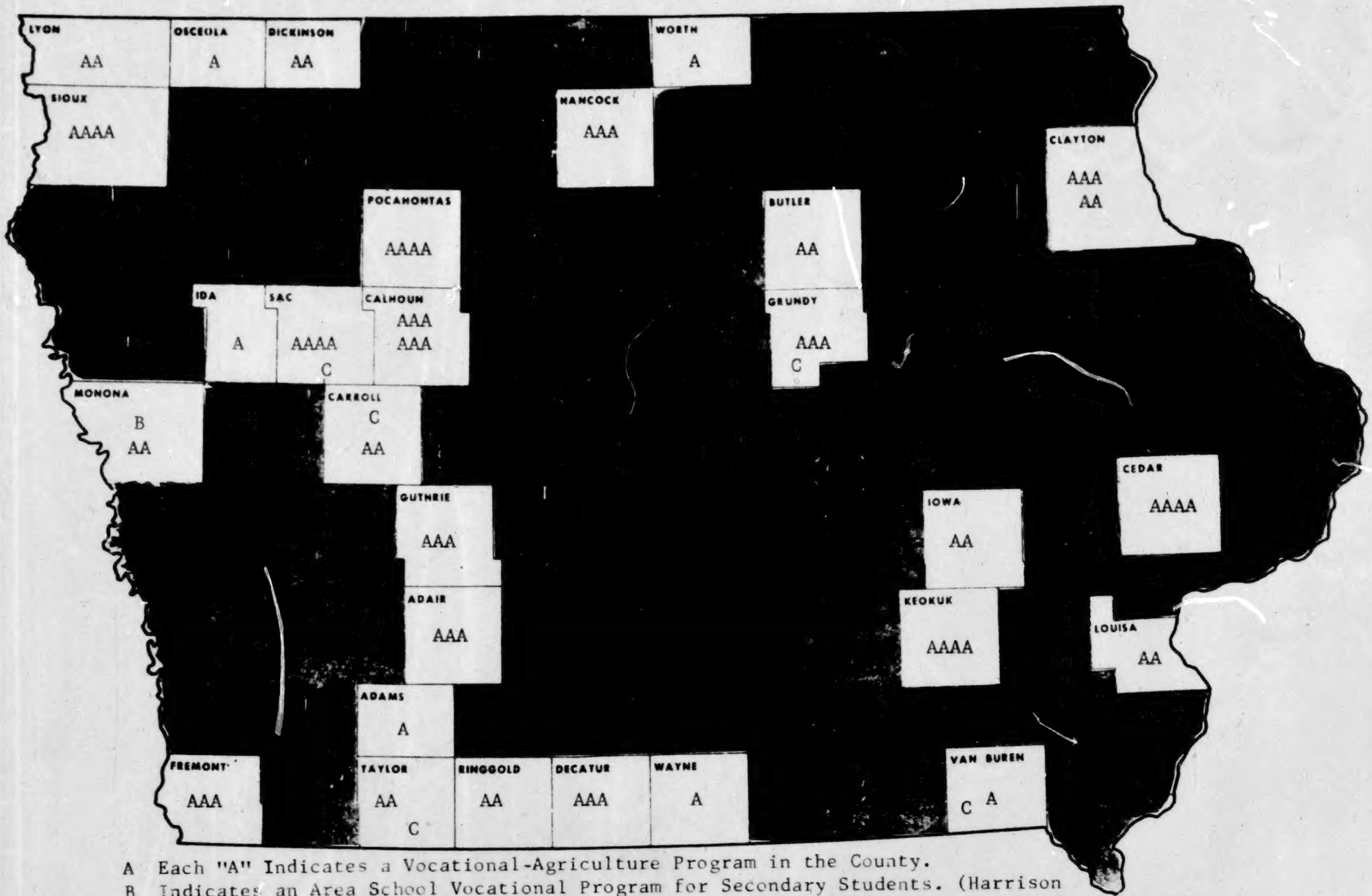
*Less than 100 not shown

Source: Iowa Employment Security Commission
Research and Statistics Department
September 1973

Map 8

Map By: Iowa Career Education Advisory Council

Counties With No School District Larger Than 1,400 Students



LYON
AA
OSCEOLA
A
DICKINSON
AA
WORTH
A
SIOUX
AAAA
HANCOCK
AAA
CLAYTON
AAA
AA
POCAHONTAS
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BUTLER
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IDA
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SAC
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CALHOUN
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GRUNDY
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MONONA
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CARROLL
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CEDAR
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GUTHRIE
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IOWA
AA
ADAIR
AAA
KEOKUK
AAAA
LOUISA
AA
ADAMS
A
FREMONT
AAA
TAYLOR
AA
C
RINGGOLD
AA
DECATUR
AAA
WAYNE
A
VAN BUREN
C A

A Each "A" Indicates a Vocational-Agriculture Program in the County.

B Indicates an Area School Vocational Program for Secondary Students. (Harrison County was omitted from the map since this county is currently served by four Area School programs.)

C Indicates a Cooperative Program in the County.

No other vocational (wage earning) program offered by a local school is available in the county with exception of C.

APPENDIX E

Table 1

1975 Projections for Net Labor Demand

	Projected Expansion and Replacement Needs	Projected Labor Supply	Net Labor Demand	% of Net Labor Demand is of Total
Agriculture	5,152	3,418	1,734	5%
Distributive Education	8,451	765	7,686	23%
Health Occupations Education	4,900	3,154	1,786	5%
Home Economics	717	753	(36)	-.01%
Office Education	8,301	2,223	6,078	18%
Technical	1,344	580	764	2%
Trade and Industrial	23,802	8,094	15,708	47%
			33,720	99%

Table by the Iowa Career Education Advisory Council. Summary data extracted from Table 1, 1975 State Plan for Career Education.

STATE OF IOWA
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Table 2

Annual Estimates and Actual Cooperative Programs Implemented Based on State Plan Projections and Annual Reports Data

State Plan

	Part B (Public Law 90-576)						Part G (Public Law 90-576)					
	Secondary		Postsecondary		Total		Secondary		Postsecondary		Total	
	Est.	Actual	Est.	Actual	Est.	Actual	Est.	Actual	Est.	Actual	Est.	Actual
FY 1970	(1)	(1)	(1)	(1)	645	192	(1)		(1)		15	82
FY 1971	(1)	(1)	(1)	(1)	779	151	(1)		(1)		23	184
FY 1972	(1)	(1)	(1)	(1)	(2)	(2)	(1)		(1)		140	4
FY 1973	155	238(3)	82	89(3)	237	327	189	14(3)	7	6(3)	196	20
FY 1974	238	227(4)	89	89(4)	327	316	20	18(4)	24	2(4)	44	20

1. Estimates by type of institution not identified.
2. Offerings not estimated and actual programs not reported.
3. From the 1974 State Plan for Career Education (An estimation)
4. From the 1975 State Plan for Career Education (An estimation)

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Table 3

A Comparison of Planned Expenditures for Cooperative Vocational Programs by School Organization Level

		Secondary					Postsecondary				
			Annual Funds Budgeted ($000)					Annual Funds Budgeted ($000)			
Year	Cooperative Program	Est. Annual Enrollment	Local & State	Fed.	Total	Budget per Student	Est. Annual Enrollment	Local & State	Fed.	Total	Budget per Student
1973	Part B	6,553	17	21	38	5.80	2,848	359	64	423	148.53
	Part G	1,248	322	210	532	426.28	140	166	107	273	1,950.00
		7,801	339	231	570		2,988	525	171	696	
1974	Part B	5,227	15	20	35	6.70	2,900	403	72	475	163.79
	Part G	342	94	214	308	900.58	450	49	111	160	355.56
		5,569	109	234	343		3,350	452	183	635	
1975	Part B	5,280	2,215	502	2,717	514.58	3,200	4,599	942	5,541	1,731.56
	Part G	1,250	140	561	701	560.80	1,050	431	1,734	2,155	2,052.38
		6,530	2,355	1,063	3,418		4,250	5,030	2,676	7,696	

Table Developed by the Iowa Career Education Advisory Council

Source for Enrollment and Budget Information, Iowa State Plans for 1973, 1974, and 1975, Planning and Budgeting Table.

Table 4

State Areas with Net Out-Migration

1965 - 1970

(For Graphic Illustration See Appendix D, Map 6)

Area	Number of Out-Migration	Percent of Employed Persons in Manufacturing Percent	Rank by Areas	Amount	Area Median Family Income Rank by Area
1	7142	10.3	12	7875	11
4	2703	16.1	10	8079	10
3	2505	17.0	8	7689	12
5	1791	21.6	5	8623	8
A	657	17.4	7	9035	7
B	172	16.7	9	9356	6

State Areas with Net In-Migration

1965 - 1970

6	4757	26.5	4	9503	5
F	3587	34.7	1	10,721	2
C	2079	19.0	6	10,682	3
E	1898	30.1	2	10,054	4
D	1406	29.2	3	10,755	1
2	977	13.0	11	8550	9